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ABSTRACT

This guide presents a brief history and background of the Alaska environmental education program. A directory follows which lists descriptions and addresses for Alaska resources in environmental education (EE) including: (1) agencies and organizations; (2) national EE organizations; (3) colleges and universities; (4) programs; (5) speakers; (6) books; (7) agency publications; (8) curricula; (9) audiovisual materials; (10) miscellaneous tools; (11) sources of supplies; (12) sites and facilities; (13) museums; (14) funds; (15) personnel; and (16) a response form. (BE)

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United States
Department of
Agriculture

Forest Service

Alaska Region
Report
Number 85

Environmental Education Resources Directory for Alaska

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
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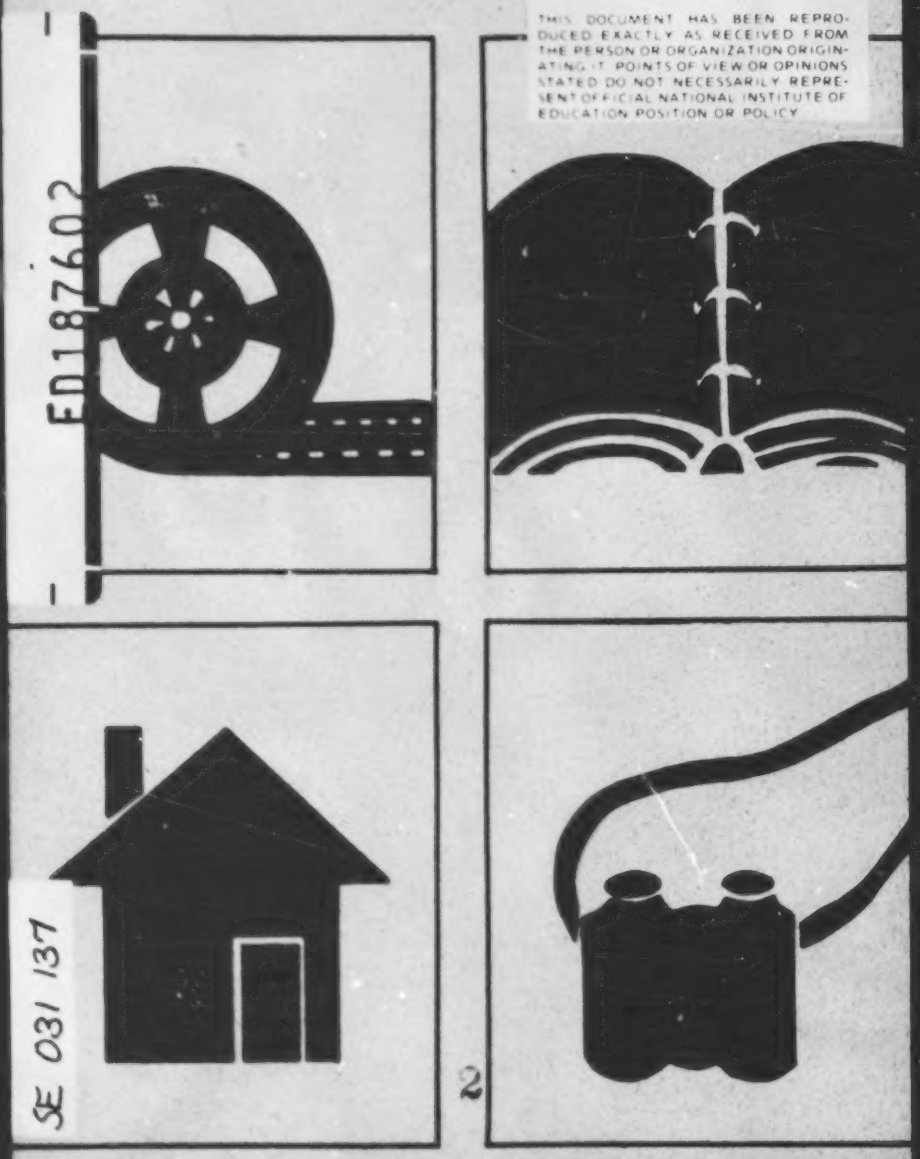

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Environmental Education Resources Directory for Alaska

Foreword

This directory is a result of the 1978 Alaskan Governor's Conference on Environmental Education. It has been designed to give Alaskan environmental educators fingertip access to information concerning educational resources well-suited for use in Alaska.

The information was provided by over 100 individuals, agencies, and organizations. It is by no means complete. Although we solicited information from nearly 300 sources, we have undoubtedly overlooked someone.

The directory was compiled by Kristi Kantola, USDA Forest Service; Dolores Moulton, Alaska Department of Fish and Game; Marti Early, Alaska Department of Environmental Conservation, and Mary Lou King, a volunteer from Juneau.

Reference to programs, organizations, facilities, and resource materials in this directory is only for identification and does not imply endorsement by the USDA Forest Service, Alaska Department of Environmental Conservation, or Alaska Department of Fish and Game. Other programs, organizations, facilities, and resource materials may be equally suitable.

Additional copies of this directory may be obtained (as long as the supply lasts) by writing USDA Forest Service, Office of Information, P.O. Box 1628, Juneau, AK 99802.

The Foundation: A Brief History of Early Environmental Education Efforts in Alaska.

Environmental education (EE) in Alaska beg in when the first father taught his son to track caribou across the tundra, or when the first youngster recognized the typical habitat of the King Crab, or when the first grandmother showed her granddaughter how to make a birch bark basket.

Within schools, the origins of EE are equally difficult to define. Probably environmental education within Alaskan schools began with the first schools in the State. Those of you who have read the book "Tisha" may remember Anne Hobbs' environmental education efforts (although she probably never called them that) in Chicken in 1927 when she directed her class in developing a detailed map of their community.

Formal statewide environmental education efforts are easier to identify. In 1969, a series of environmental education workshops were conducted throughout the State by U.S. Department of Agriculture (USDA) Forest Service personnel. Led by Alice Cook, former Forest Service environmental education specialist, the team geared workshops toward educators and agency personnel. In each workshop, participants investigated parts of the environment using the process approach, an instructional method in which the learner observes, measures, classifies, infers, predicts, communicates, formulates hypotheses, experiments, and interprets data.

In 1970, the first accredited environmental education workshops were offered through the University of Alaska. In 1971, the Alaska Department of Education was awarded a Federal grant under the Environmental Education Act which funded a position for an environmental education coordinator. Mr. Larry Hill took this position the first 2 years, and a member of his staff, Ms. Jo Michalski, took over the coordinator's position during the next year, 1973-74. Mr. Paul Gulyas was the coordinator during the final year. The position's funds were depleted in 1975, and the State did not provide further funding. The 4-year Department of Education program included:

- **Teacher workshops,** conducted throughout the State, emphasizing "process education" as the vehicle for presenting environmental education. Department of Education personnel often combined forces with representatives of the Forest Service, Alaska Department of Fish and Game, and other agencies to present the workshops.
- **Publication of curriculum materials,** such as "Environmental Experiences," a book of lesson plans for Alaskan environmental studies developed by workshop participants. (Now available from the Department of Education's Knowledge Base Program.)

• **A monthly newsletter,** sent to the schools to inform teachers about activities in the world of environmental education.

• **A statewide environmental education advisory committee** of ten members appointed by the Commissioner of Education. The mission of the advisory committee was to "advise the Commissioner of Education on implementing a statewide environmental education program of action." (From "Planning Guidelines for Environmental Education.")

• **Publication of "Planning Guidelines for Environmental Education,"** a working plan to "enable formal and community educational systems to make better use of the total learning environment (including natural, manmade and human resources) to further the concept of harmony between man and the environment." (Also available through Department of Education's Knowledge Base Program.)

• **The First Governor's Conference on Environmental Education** conducted in Fairbanks in 1974. The goal of the conference was to "provide Alaskan educators, resource personnel, and local and State decisionmakers with the necessary expertise to initiate or add to effective community environmental education programs for both student and adult participants." The 110 participants included one educator from each school district in the State, whose attendance was financed by Federal grant monies. Among the sessions were "Outdoor Field Investigations," "Environmental Economics," "Essentia," "Environmental Strands," "Land Use Simulation Game," and "Techniques of Group Involvement." Conference staff members represented the Alaska Department of Education, Forest Service, ESSENTIA, National Park Service, and Pacific Lutheran University.

Since 1974, when the State chose not to fill the environmental education coordinator position, the Department of Education has provided environmental education service, when requested, through the Talent Bank. The Talent Bank is a group of resource people who can assist schools or school districts with special projects. The Department of Education pays travel expenses, per diem, and substitute teacher's salary (when necessary) for Talent Bank resource people.

1978 Governor's Conference on Environmental Education

The 1978 Governor's Conference on Environmental Education was held October 20-22, near Anchorage. It was sponsored by Anchorage's CommittEE, USDA Forest Service, Alaska Department of Environmental Conservation and Alaska State Parks.

Forty people attended the conference. They represented the geographical range of Alaska from Gates of the Arctic Wildlife Refuge to Sitka. Participants were from private, local, State, and Federal interests. The "public forum" opportunity provided by the conference helped reestablish efforts toward developing cooperation among EE interests at all levels.

The objectives of the conference were to—

- Identify major environmental education issues in Alaska.
- Coordinate existing environmental education efforts to develop "action plans" for issue resolution.
- Acquire information to compile an "Alaskan Environmental Education Resources Directory."
- Share individual environmental education ideas and experiences.

Workshop participants identified 15 major issues facing environmental education in Alaska. They also developed informal plans to address ten of the issues.

At the conclusion of the conference, participants sent a letter to Governor Jay Hammond recommending approval of two proposals for furthering environmental education efforts in the State.

"**Priority 1.**—The Governor will establish an interagency action team to further environmental education efforts in Alaska and direct participating State agencies to provide travel funds and personal services for appropriate team members. With the Department of Environmental Conservation taking the lead role, the team will include one representative from each of these agencies: Department of Environmental Conservation, Department of Education, Department of Fish and Game, and State Division of Parks. Also, a representative of the USDA Forest Service will be asked to join the team to continue the policy of State-Federal cooperation.

"The action team will—

- Coordinate environmental education efforts with other State and Federal units, school districts, businesses, individuals, and interest groups in Alaska.
- Seek funds from various sources for school districts and others to develop and maintain environmental education programs and materials suited to Alaska.
- Promote and support the goal statement of the Second Governor's Conference on Environmental Education.

• Determine and help resolve other statewide environmental education concerns.

"Priority 2.—Upon recommendation by the action team, the Governor will appoint and fund an advisory board to the interagency action team. This advisory board will include the appointment of members based on the recommendation of the lead agency. Appointees would include educators, agencies, and other individuals." (From the letter to the Governor.)

On July 19, 1979, the Governor approved the request, in part, by appointing an interagency environmental education action team. The Alaska Department of Environmental Conservation was designated as the lead agency for the team, which also includes representatives of the Alaska Department of Fish and Game, Alaska Division of Parks, and the Alaska Department of Education. The team will coordinate EE programs, serve as a central communications point for EE programs, assist school districts and colleges in program planning, and address the problems identified at the 1978 Governor's Conference on EE.

Major Issues Facing Environmental Education in Alaska

These are the issues identified by participants at the 1978 Alaska Governor's Conference on Environmental Education:

1. We need more resource materials that specifically deal with Alaskan environments.
2. Constraints to school district program development:
   - A. Legal liabilities.
   - B. Community values/ employment.
   - C. Curriculum.
   - D. Funds.
   - E. Cooperation between political entities, schools, agencies, and so forth.
   - F. Controversial issues.
   - G. Teacher training.
3. Environmental education is perceived as a "real" threat to lifestyles.
4. We need statewide environmental education coordination (possibly an EE coordinator), an EE state plan, and a definition of EE.
5. Adult education.
6. Lack of legislative support for environmental education.

Develop a public unified action group to produce positive political action.

7. Environmental education must have local program support (funds).
8. Need for land use and resource planning on a statewide and long-range basis.
9. The political system is crisis-oriented not planning-oriented.
10. Statewide environmental education should not be local-issue focused. (We need more communication, resource sharing, regional development-oriented programs, and process-oriented programs.)

11 Inability to understand, affect, or work within the political system.

12 How do we make environmentalism profitable?

13 Present economic philosophy is in direct conflict with EE.

14 There is no EE priority within education agencies. There is EE priority within resource management agencies. This results in communication problems between education and resource agencies. Resources expended on EE do not reach the target.

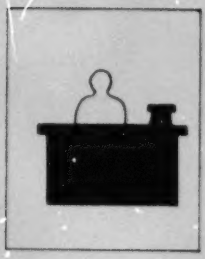
15 Materials, curriculum, programs, and texts (and textbook companies).

A Develop new materials.

B Disseminate them.

C Provide teacher training.

D Motivate teachers.



Agencies and Organizations

Federal Agencies

USDA Forest Service is the agency responsible for managing Alaska's Chugach and Tongass National Forests. National forests are managed to provide a continuing supply of water, forage, wildlife, recreational opportunities, and wood. For further information, contact USDA Forest Service, P.O. Box 1628, Juneau, Alaska 99802.

USDI Bureau of Land Management is a Federal agency whose mission is to manage Federal public land for multiple use of the resources. Management is based upon land use plans and public involvement in the decisionmaking process. For further information, contact USDI Bureau of Land Management, 701 C Street, Pouch 13, Anchorage, Alaska 99513.

USDA Cooperative Extension Service, in cooperation with the University of Alaska, teaches people living skills, particularly in agriculture and home economics. The agency conducts workshops, publishes information, produces television programs, and sponsors 4-H and Homemaker Clubs. For further information, contact USDA Cooperative Extension Service, Box 109, Juneau, Alaska 99802.

U.S. Fish and Wildlife Service is the USDI agency responsible for the conservation, use, understanding, and enjoyment of fish and wildlife resources of the Nation. The Service manages 30 million acres of land in 329 refuges and 90 fish hatcheries. For further information, contact U.S. Fish and Wildlife Service, USDI, 1011 E. Tudor Road, Anchorage, Alaska 99503.

USDI Heritage Conservation and Recreation Service was created in 1978 to bring together a variety of programs designed to conserve the Nation's cultural and natural resources and to assure adequate opportunities for recreation. HCRS's principal responsibilities are historic preservation, natural resource conservation, and recreation. For further information, contact the USDI Heritage Conservation and Recreation Service, 1011 E. Tudor, Suite 297, Anchorage, Alaska 99503.

Bureau of Indian Affairs is the USDI agency responsible for protecting the rights of Indian tribes and, together with the tribes, seeing that tribal resources are prudently developed to enhance their value. For further information, contact USDI Bureau of Indian Affairs, P.O. Box 3-8000, Juneau, Alaska 99801.

USDI Geological Survey provides the Nation information about the configuration of the land surface, the composition and structure of the rocks at and beneath the surface, the distribution and character of its energy, mineral and water resources, and the nature of geological processes. For further information, contact USDI Geological Survey, 218 "E" Street, Anchorage, Alaska 99501.

USDI National Park Service manages national parks, national monuments, and other designated Federal lands to conserve their scenery, natural and historical objects, and wildlife. The Alaska Area Office is responsible for the administration of the 16 areas of the National Park System in Alaska. For further information, contact USDI National Park Service, 540 West Fifth Avenue, Anchorage, Alaska 99501.

U.S. Army Corps of Engineers provides development of water resources, including construction of major dams, reservoirs, levees, harbors, waterways, locks, and flooding and navigational control structures. For further information, contact U.S. Army Corps of Engineers, Box 7002, Anchorage, Alaska 99510.

Alaska State Agencies

Department of Fish and Game is the agency responsible for managing the fish and wildlife resources of the State. The management goal is to promote the maintenance, rehabilitation, and enhancement of those resources and to encourage sustained optimum use consistent with long-term social, economic, cultural, and environmental needs of the public. For information contact: Chief, Public Communications Section, ADFG, Subport Building, Juneau, Alaska 99801.

Department of Environmental Conservation is responsible for conserving, protecting, and improving Alaska's natural resources and environment and for controlling water, land, and air pollution. These responsibilities are carried out through the exercise of regulatory authority, technical assistance to people and organizations, and public information and education efforts. For further information, contact Information Office, Alaska Department of Environmental Conservation, Pouch O, Juneau, AK 99811.

Department of Natural Resources "administers the state program for the conservation and development of natural resources, including forests, parks and recreational areas, lands, waters, agriculture, soil conservation and minerals, but excluding fish and game, and develops, protects and administers the state program relating to historic and archeological sites, objects, and related matters. Seven divisions comprise the organization of the department: Division of Agriculture, Division of Geological and Geophysical Survey, Division of Lands, Division of Land and Water Management, Division of Minerals and Energy Management, Division of Oil and Gas Conservation, and Division of Parks." (From "The Alaska Blue Book," 1979.) For further information, contact Alaska Department of Natural Resources, Pouch M, Juneau, Alaska 99811.

Department of Community and Regional Affairs "is responsible for rendering maximum state assistance

to government at the community and regional level. This is accomplished through financial, advisory, and management assistance. Various state appropriations are administered, such as rural development grants, municipal programs, municipal organizational grants, and national forest receipts payment. The department sponsors municipal training seminars and provides advisory services in the areas of organization, management, finance and financial reporting, legal matters, community planning, and the employment of manpower. Direct staff support is provided to the Local Boundary Commission. A variety of State and Federal program appropriations are administered which provide a large range of developmental services to communities and nonprofit organizations statewide.

The department is organized into five divisions: Administrative Services, Local Government Assistance, Community Planning, Community and Rural Development, and Manpower." (From the "Alaska Blue Book," 1979.) For further information, contact Alaska Department of Community and Regional Affairs, Pouch B, Juneau, Alaska 99811.

Department of Education "exercises regulatory and supervisory authority over local school districts, including regional attendance areas, approves private schools, and licenses preelementary schools. It provides research and consultative service to schools, the legislature, and other governmental agencies in addition to the functions carried out as responsibilities of the individual divisions within the department. The organization of the department includes: Executive Administration; Division of Management; Law and Finance; Division of Educational Program Support; Division of Vocational Rehabilitation; and Division of State Libraries and Museums." (From "The Alaska Blue Book," 1979.) For further information, contact Alaska Department of Education, Pouch F, Juneau, Alaska 99811.

Other Organizations

Alaska Natural History Association is a nonprofit organization dedicated to providing interpretive materials relating to cultural and natural history. A sales outlet is in the U.S. Fish and Wildlife Service's Anchorage facility. A list of available items may be requested. For more information, contact Dave Patterson, Division of Wildlife Refuges, U.S. Fish and Wildlife Service, USDI, 1011 East Tudor Road, Anchorage, Alaska 99503.

Western Regional Environmental Education (WREEC) is an organization composed of representatives of State departments of education and principal resource management agencies of the western States, in cooperation with the U.S. Department of Education. Their purpose is to aid in developing and distributing environmental materials and projects

and to coordinate interstate environmental education programs. For further information, contact Ed Eschler, President, WREEC, Office of Superintendent of Public Instruction, 1300 Eleventh Avenue, Helena, Montana 59601.

CommittEE, an organization which began as an EE advisory group to the Anchorage School District, conducts a number of environmental education programs and projects in the Anchorage area. Members include agency and organization representatives, educators, and other interested people. For further information, contact Dave Allen, USDA Forest Service, Pouch 6606, Anchorage, Alaska 99502.

Southeast Alaska Conservation Council (SEACC) is a nonprofit conservation organization which is involved in research and educational activities with regard to the conservation of natural resources in southeast Alaska. The organization's goals include balancing resource developments in southeast Alaska with the protection of the region's most outstanding wilderness lands and resources. For further information, contact SEACC, Box 1692, Juneau, Alaska 99802.

Alaska Chapter, Sierra Club
Box 2025
Anchorage, Alaska 99510

Alaska Conservation Society
Box 80192, College Station
Fairbanks, Alaska 99701

Friends of the Earth
1069 W. Sixth Avenue
Anchorage, Alaska 99501

Greenpeace Alaska
551 L Street
Anchorage, Alaska 99501

Juneau Group of Sierra Club
P.O. Box 2633
Juneau, Alaska 99803

Lynn Canal Conservation
Box 654
Haines, Alaska 99827

National Audubon Society
800 Glacier Avenue
Juneau, Alaska 99801

Petersburg Conservation Society
Box 630
Petersburg, Alaska 99833

Sierra Club—Alaska Representative
545 E. Fourth Avenue
Anchorage, Alaska 99501

Sitka Conservation Society
P.O. Box 316
Sitka, Alaska 99835

Tongass Conservation Society
Box 7282
Ketchikan, Alaska 99901

Trustees For Alaska
835 D Street
Anchorage, Alaska 99501

National Environmental Education and Interpretation Organizations

Several national and regional organizations are dedicated to furthering environmental education and environmental interpretation. Many of these organizations provide newsletters or journals to their members and conduct professional development workshops for interpreters and environmental educators. In the following brief list of organizations, we have not included organizations which fall into the broader category of conservation organizations.

Alliance for Environmental Education, Inc.
1619 Massachusetts Avenue, N.W.
Washington, D.C., 20036

American Nature Study Society
RFD 1
Homer, New York 13077

American Society for Ecological Education, Inc.
c/o College of Environmental and Applied Science
Governors State University
Park Forest South, Illinois 60466

Association of Interpretive Naturalists, Inc.
Central Business Office
6700 Needwood Road
Derwood, Maryland 20855

Conservation Education Association
Richard Myshak, President
U.S. Department of the Interior
Room 3148, Main Interior Building
Washington, D.C. 20240

Center for Environmental Education, Inc.
2100 M. Street, N.W.
Washington, D.C. 20037

National Association for Environmental Education
P.O. Box 560931
Miami, Florida 33156

Western Interpreters Association
6986 La Jolla Boulevard
La Jolla, California 92037

Colleges and Universities

Degree Programs

A number of degrees in the environmental and educational fields are offered through Alaskan colleges and universities. **Sheldon Jackson College** (SJC) in Sitka offers Associate in Science, Associate in Elementary Education, and Bachelor of Arts in Education degrees. Among the options for an individual pursuing an AS degree are fisheries technology and forestry technician programs.

Alaska Pacific University (APU) in Anchorage offers one undergraduate 4-year degree—the Bachelor of Arts in liberal arts. Students may specialize in environmental education, natural resources, biological sciences, physical sciences, or education.

The University of Alaska (UA) offers degrees in 23 environmental and education fields. Listed below are the degrees offered, and the locations which offer them (in parentheses).

Adult Education
- Associate of Arts (Kuskokwim)

Biology
- Associate of Arts (Anchorage, Kodiak)
- Bachelor of Science (Juneau)

Biological Sciences
- Bachelor of Arts (Anchorage, Fairbanks)
- Bachelor of Science (Anchorage, Fairbanks)
- Master of Arts in Teaching Biological Sciences (Fairbanks)
- Master of Science in Biological Sciences (Fairbanks)

Earth Sciences
- Bachelor of Arts (Fairbanks)

Education
- Certificate (Northwest)
- Associate of Arts (Kuskokwim, Northwest)
- Associate of Applied Science (Northwest)
- Bachelor of Education (Anchorage, Fairbanks, Juneau)
- Master of Arts in Teaching Education (Anchorage, Fairbanks, Juneau)
- Master of Education (Anchorage, Fairbanks, Juneau)

Environmental Science
- Associate of Arts (Anchorage)

Fire Science Technology
- Certificate (Tanana Valley)
- Associate of Applied Science (Anchorage, Tanana Valley)

Fisheries
- Bachelor of Science (Juneau)
- Master of Science (Juneau)

Fisheries Biology
Bachelor of Science (Fairbanks)
Master of Science (Juneau)

General Science
Bachelor of Science (Fairbanks)
Master of Science (Fairbanks)

Geology
Associate of Arts (Anchorage)
Master of Science (Fairbanks)
Doctorate of Science (Fairbanks)

Geology and Geophysics
Bachelor of Science (Fairbanks)

Geosciences
Master of Science (Fairbanks)

Land Resource Management
Associate of Arts (Kuskokwim)

Marine Biology
Master of Science (Fairbanks)

Natural Resources Management
Bachelor of Science (Fairbanks)
Master of Science (Fairbanks)

Natural Science
Associate of Arts (Anchorage, Kodiak)
Associate of Applied Science (Kenai)
Bachelor of Science (Anchorage)

Northern Studies
Bachelor of Arts (Fairbanks)

Science
Associate of Arts (Fairbanks)

Science Management
Master of Science (Anchorage, Fairbanks, Juneau)

Wildlife Management
Bachelor of Science (Fairbanks)
Master of Science (Fairbanks)

Professional Development Courses

Many colleges and universities offer professional development courses for educators and others. Such courses as "Wildflowers of Alaska," "Wetlands Ecology," "Alaskan Environmental Studies," "Mushrooms," and "Southeast Alaskan Marine Studies" are often offered on weekends or for 2 or 3 days during the summer. Most courses are for one or two units and involve hands-on field experience. Contact the nearest college or university for further information.

Instructing Courses

Most college and university courses are taught by full-time staff members of that institution. But, individuals or teams, including agency or organizational representatives, sometimes offer courses not otherwise provided by the school.

Generally, an institution requires that an individual teaching a course have teaching experience and a master's degree or doctorate in the

field in which he/she proposes to teach or a bachelor's degree in the field and experience judged by the institution to be equivalent to a master's degree. Most schools require each potential instructor to submit a college transcript, an application, and several letters of recommendation.

Individuals who wish to teach extension courses should contact the campus through which they hope to offer the course. Specific course and instructor application procedures vary from campus to campus.

When contacting someone about offering an EE course, it is best to take along a written summary of the course content and a list of course objectives. The individual proposing the course should know and be able to thoroughly explain what he/she plans to teach.

Generally, extension courses are 21-45 hours long, with students earning one semester unit of credit for each 42 to 45 contact hours, which are a combination of class lecture time, outside assignment time, and laboratory or field time. The cost to students is usually $15 to $25 a unit ($75 a unit at APU). Courses may be conducted in workshop settings of 2 to 5 days or in class settings, meeting several hours each week for 5 to 15 weeks. For most courses, school facilities are available or the instructor may choose to hold the class elsewhere.

The appropriate people to contact about teaching courses at Alaskan colleges and universities are: The president at any community college; the chancellor for the University of Alaska at Fairbanks, Anchorage, or Juneau; the vice-president for academic affairs or the director of the teacher education program at Sheldon Jackson College; the provost or the assistant dean for academic affairs at Alaska Pacific University.

Other Services Provided

Universities and colleges can often provide other services for environmental educators. For instance, many campuses will rent classrooms for EE programs, provide curricula, or make their libraries available to environmental educators. The sociology department of the University of Alaska at Anchorage will assist with studies focusing on environmental and social effects assessment, public attitudes to growth policies, and so forth.

Even if we knew every service Alaskan colleges and universities could provide environmental educators, we could not list them all here. The best thing to do is to investigate for yourself.

Address List

Sheldon Jackson College
Dr. Hugh Holloway, President
P.O. Box 479
Sitka, Alaska 99835

Alaska Pacific University
Dr. Glenn A. Olds, President
Anchorage, Alaska 99504

Inupiat College
Barrow, Alaska 99723

University of Alaska (System)
Dr. Jay Barton, President
101 Bunnell Building
Fairbanks, Alaska 99701

University of Alaska at Anchorage
Dr. Frank Harrison, Chancellor
2651 Providence Drive
Anchorage, Alaska 99504

University of Alaska at Juneau
Dr. Michael Paradise, Chancellor
P.O. Box 1447
Juneau, Alaska 99802

University of Alaska at Fairbanks
Dr. Howard A. Cutler, Chancellor
Gruening Building
Fairbanks, Alaska 99704

University of Alaska Community Colleges
Extension and Rural Education
Dr. Patrick O'Rourke, Chancellor
2221 East Northern Lights Boulevard
Anchorage, Alaska 99504

Juneau-Douglas Community College
Dr. Vern C. Oremus, Campus President
P.O. Box 1447
Juneau, Alaska 99802

Ketchikan Community College
Dr. V. Rodney (Rod) Enos, Campus President
Box 358
Ketchikan, Alaska 99901

Sitka Community College
Mr. David (Dave) Knapp, Campus President
Box 1090
Sitka, Alaska 99835

Anchorage Community College
Dr. Edwin (Ed) Biggerstaff, Campus President
2533 Providence Avenue
Anchorage, Alaska 99504

Tanana Valley Community College
Dr. Glen Massay, Campus President
Fairbanks, Alaska 99701

Kenai Peninsula Community College
Dr. John Wilsey, Campus President
Box 848
Soldotna, Alaska 99669

Matanuska-Susitna Community College
Mr. Alvin (Al) Okeson, Campus President
Box 899
Palmer, Alaska 99645

Kodiak Community College
Mrs. Carolyn Floyd, Campus President
Box 946
Kodiak, Alaska 99615

Kuskokwim Community College
Mr. George Irvin, Campus President
Box 368
Bethel, Alaska 99559

Northwest Community College
Dr. Donald (Don) Gatzke, Campus President
Box 400
Nome, Alaska 99762

Prince William Sound Community College
Mr. John Devens, Acting Campus President
Box 590
Valdez, Alaska 99686

Chukchi Community College
Mr. Fred Muhs, Acting Campus President
Box 297
Kotzebue, Alaska 99752

Programs

National

ERIC/SMEAC Clearinghouse for Science, Mathematics and Environmental Education Materials is a center that organizes and disseminates information and materials on science, mathematics, and environmental education to teachers, administrators, supervisors, researchers, and the public. For further information contact The Ohio State University, School of Natural Resources, 1200 Chambers Road, Third Floor, Columbus, Ohio 43212.

Statewide

Environmental Education Workshops are presented by the USDA Forest Service in conjunction with other agencies. One or two, 5-day workshops and several weekend workshops are offered each year. The purpose of the workshops is to help participants develop new and more successful ways of involving their own audiences in understanding and participating in resource management and environmental education. Sessions offered include field investigations of wildlife habitats, forest, water, soils, and marine resources; map and compass use; techniques of group involvement; investigating an environmental issue, and more. For further information or to request a workshop in your area, contact Environmental Education Specialist, USDA Forest Service, P.O. Box 1628, Juneau, Alaska 99802.

The **Youth Conservation Corps** is a summer work/education program for youth, ages 15-18, conducted throughout the Nation. In Alaska during summer 1979, 350 young people participated in the program. Youth Conservation Corps enrollees worked 30 hours a week on conservation-related projects and spent 10 hours a week involved in environmental education.

Youth who participated in the program came from towns and villages all over Alaska. Fourteen camps operated from Ketchikan to the Fairbanks areas. Camps were conducted by the Forest Service, Bureau of Land Management, Alaska State Parks (Alaska Conservation Action Corps), U.S. Fish and Wildlife Service, Elmendorf Air Force Base, and Eielson Air Force Base. For further information, contact the Office of Civil Rights and Human Resources, USDA Forest Service, P.O. Box 1628, Juneau, Alaska 99802; USDI Office of Youth Programs, Room 622, Fourth and Pike Building, Seattle, Washington, or other agencies.

Alaska Conservation Action Corps (ACAC) runs coeducational youth programs which integrate work, environmental education, outdoor skills/activities, and group living. Funding is from such sources as Youth Conservation Corps and Summer Youth Employment Program.

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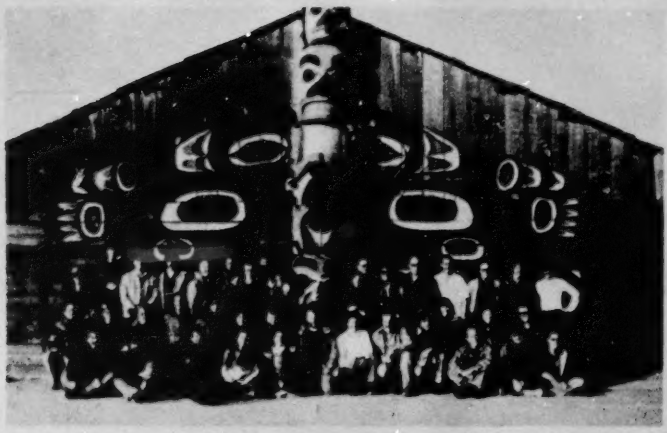
A Forest Service naturalist leads third graders in a study of glacial landscape during Juneau's Sea Week program.

A Youth Conservation Corps work crew leaves for a day of trail construction on Admiralty Island National Monument.



These people participated in an environmental education workshop in Haines in 1978. The workshop was sponsored by the Forest Service, Alaska Department of Environmental Conservation, and Alaska State Parks.

Belle Mickelson leads a group of students through a soils study in Fairbanks, during a University of Alaska class. (Jill Thayer photograph)

(All photographs are by USDA Forest Service, unless otherwise credited.)

ACAC also coordinates the efforts of Alaska State Parks in environmental education and interpretive programming. And, ACAC provides technical assistance and staff service to agencies involved in resource management. For further information contact ACAC, Alaska Division of Parks, 619 Warehouse Ave., Suite 210, Anchorage, Alaska 99501.

The **Alaska Multimedia Education Program** provides learning kits on loan to Alaskan educators. Each kit deals with one topic related to the cultural heritage, history, or environment of Alaska. Among the more than 25 kits are these: Alaska's salmon, Eskimo archaeology, fishing and hunting of Tlingit men, and Peregrine falcon. Kits are self-contained resource centers for teaching units. They include artifacts, films, videotapes, tools, games, books, puzzles, other instructional materials, and a teacher's manual.

Kits are available to schools throughout the State. First consideration is given to rural schools.

For further information, contact Martha Stevens, Curator of Education, Alaska State Museum, Pouch FM, Juneau, Alaska 99811.

Alaska Sea Week, designed to expand Juneau's Sea Week program (a marine education program), will be launched in 14 pilot communities around the State over a 3-year period. The program will be funded through Sea Grant. For further information, contact Belle Mickelson, School of Agriculture and Land Resources Management, 301 O'Neill Building, University of Alaska, Fairbanks, Alaska 99701.

Environmental education **workshops, credit classes, and inservice training,** for school districts may be arranged by contacting Jo Michalski. Jo formerly was an environmental education specialist with the State Department of Education. She is now available to conduct school district EE programs on a contractual basis. For further information, contact Jo Michalski, 3543 Stanford Drive, Anchorage, Alaska 99504.

"Project Learning Tree (PLT) Workshops" are offered periodically by the Alaska Loggers Association. The workshops feature activities from two PLT curriculum guides—one for kindergarten through sixth grade and one for grades 7 through 12. The activities are interdisciplinary and are mainly related to forests and forest resources. Curriculum guides are given only to workshop participants. For further information, contact Information Office, Alaska Loggers Association, Suite 200, 111 Stedman, Ketchikan, Alaska 99901.

The **Talent Bank**, operated by the State Department of Education, can provide specialists to assist school districts with conferences, workshops, inservice training, and special projects. For further information, contact the Alaska Department of Education, State Office Building, Pouch F, Juneau, Alaska 99811.

Through the **Promising Practices Program**, school districts may submit curricula to the State Department of Education for evaluation. The department will also provide information about model programs in the State. For further information, contact the Alaska Department of Education, State Office Building, Pouch F, Juneau, Alaska 99811.

Northwest Regional Education Laboratory is a regional research and development institution. It's mission is to assist education, government, community agencies, business, and labor in improving quality and equality in educational programs and processes. Programs focus on solving educational problems and meeting educational needs. Primary audience for laboratory work is education practitioners with the ultimate beneficiaries being students. A second important audience is others engaged in research and development. Networks with institutions of higher education and other research and development agencies across the country is a high priority for the laboratory. For further information, contact Northwest Regional Education Laboratory, 710 S.W. Second, Portland, Oregon.

Southeast Alaska

Alaska Marine Highway Naturalist Programs are presented by the USDA Forest Service. Naturalists present programs dealing with Alaskan natural and human history and with resource management aboard the Alaska Marine Highway (ferry) System during the summer months. For further information, contact Recreation Management, USDA Forest Service, P.O. Box 1628, Juneau, Alaska 99802.

Guided **nature walks, environmental movies, slide programs, discussions, and children's programs** are offered free to the public during the summer at the Mendenhall Glacier Visitor Center in Juneau. **Fireside programs** during winter include movies, slide presentations, and speakers who deal with environmental topics. Programs are 45 minutes to an hour long and are free. For further information, contact USDA Forest Service, P.O. Box 2097, Juneau, Alaska 99803.

During summer 1980, the Forest Service will open a visitor center in Ketchikan for the Tongass National Forest and Misty Fiords National Monument. Located on the ground floor of the Federal Building, the center will feature **displays, short environmental programs, and a naturalist** to assist visitors. The naturalist will also present scheduled programs in nearby outdoor areas and will present some programs for groups on request. For further information, contact the Public Information Officer, USDA Forest Service, Federal Building, Ketchikan, Alaska 99901.

South-Central Alaska

Environmental displays and various guided nature walks are featured at the Portage Glacier Visitor Center that is 60 miles from Anchorage on the Seward Highway. When possible, naturalists from the center also offer programs on request in local schools. A larger visitor center will be built during the eighties. At that time, a more extensive interpretive program will be launched. For further information, contact Visitor Information Officer, Chugach National Forest, USDA Forest Service, Pouch 6606, Anchorage, Alaska 99502.

Alaska Marine Highway naturalist programs are presented by the Forest Service during summer months. Programs include films, slide programs, discussions, and childrens' programs with natural history and resource management themes. Naturalists are on board the M.V. **E.L. Bartlett** from Whittier to Valdez and on the M.V. **Tustamena** from Seward to Valdez. For further information, contact Visitor Information Officer, Chugach National Forest, USDA Forest Service, Pouch 6606, Anchorage, Alaska 99502.

Several programs and services are offered by the Alaska Center for the Environment. **Wednesday sack lunch programs** feature speakers who address environmental issues. **Workshops** are offered by the center when funds are available. Topics of past workshops include "Resource Recovery," "Air Quality," "Wildlife Management," and "Alternative Energy." An extensive **library** of books, news clippings, reports, environmental impact statements, periodicals, and films are held by the center. Visitors are welcome to browse through the library, but they may only borrow books. For further information contact Alaska Center for the Environment, 1069 West Sixth Avenue, Anchorage, Alaska 99501.

Audubon Society members are sometimes available to help lead **environmental studies field trips** and **natural history classes** for youth and adult groups in the Anchorage area. For further information, contact Anchorage Audubon Society, P.O. Box 1161, Anchorage, Alaska 99501.

The Sierra Club **environmental hotline** is available for people who want to report environmental damage being done. Sierra Club members can then help the callers contact the proper authorities regarding the problem. The phone number is 274-2318 or 277-7213.

Dave Brann, in Kenai, has an extensive **Alaskan environmental information inventory** through which people may browse. He says the information is "terrific—if you can wade through the garbage." (That's probably true of the information many of us collect.) For further information, contact Dave Brann, Kenai Peninsula Borough Schools (Nanilchik School), Box 145, Nanilchik, Alaska 99639.

Northern Alaska.

The Fairbanks Environmental Center hosts a **brown bag lunch** on the first Tuesday of each month, featuring a speaker who addresses an environmental issue. The center also has a complete **environmental library** available to the public. For information, contact Fairbanks Environmental Center, 218 Driveway, Fairbanks, Alaska 99701.

An **environmental education course** is offered each semester through the University of Alaska at Fairbanks. Each semester the course, which meets each week, addresses a different environmental theme. For further information, contact Belle Mickelson, School of Agriculture and Land Resources Management, 301 O'Neill Building, University of Alaska, Fairbanks, Alaska 99701.

Investigating Energy Alternatives for Northern Climates, a program funded through a Federal environmental education grant, is being conducted by the School of Agriculture and Land Resources Management, University of Alaska at Fairbanks. A product of this project will be community and schools energy education materials. For further information, contact Belle Mickelson, School of Agriculture and Land Resources Management, 301 O'Neill Building, University of Alaska, Fairbanks, Alaska 99701.

Speakers

Speakers from the **Forest Service** are available to address school and community groups in the Anchorage area on such topics as natural resources and forest management. For further information, contact USDA Forest Service, Pouch 6606, Anchorage, Alaska 99504.

Speakers are available from the **Alaska Department of Natural Resources**, Division of Forest, Land, and Water Management. They will discuss forestry, conservation, and natural resource management for school groups and organizations in the Anchorage area. For further information, contact Public Services Forester, Department of Natural Resources, Division of Forest, Land, and Water Management, 323 E. Fourth Avenue, Anchorage, Alaska 99501.

The **U.S. Fish and Wildlife Service** maintains a speaker's bureau to meet the requests for speakers at a variety of meetings and classroom situations. Members of this group will discuss various wildlife and environmental subjects. Most levels of interest can be accommodated from elementary school classes to professional groups. For more information, contact Public Affairs Office, U.S. Fish and Wildlife Service, USDI, 1011 East Tudor Road, Anchorage, Alaska 99503.

Speakers are available in the Anchorage area from the **Bureau of Land Management** to address such topics as remote sensing, wildlife and river management, boating, rafting, canoeing, historical sites, timber, and plant resources. Contact Public Information Officer, USDI, Bureau of Land Management, 4700 E. 72nd Avenue, Anchorage, Alaska 99507.

Alaska Women in Timber can provide classroom speakers to address topics related to timber harvesting and forest management. For further information, contact K.A. Gregg, Alaska Loggers Association, Suite 200, 111 Stedmen Street, Ketchikan, Alaska 99901.

Energy-related skits, puppet shows, and class presentations are provided by **Alaska Division of Energy and Power Development.** Their office is on the seventh floor of the MacKay Building, Anchorage, Alaska 99501.

The **Alaska Outer Continental Shelf Office** can provide speakers versed in biology, oceanography (physical, geological, biological), and environmental monitoring of operators of oil and gas leases. For further information, contact Alaska Outer Continental Shelf Office, UDSI/BLM, P.O. Box 1159, Ancorage, Alaska 99510.

Kachemak Bay Defense Fund will provide a speaker who will discuss citizen awareness and citizen action in environmental issues and present a movie and slide program on the same topic. Contact Kachemak Bay Defense Fund, Box 41, Ninilchik Village, Alaska 99639.

National Park Service speakers who will deal with the historical, natural, and cultural resources of the national parks of Alaska are available in the Anchorage area. For further information, contact Area Director, USDI National Park Service, Room 202, 540 W. Fifth Avenue, Anchorage, Alaska 99501

Books

This directory lists books suitable for environmental studies in Alaska. Not all are specific to this State, but they all provide information which can be used or adapted for use in Alaska.

We have tried to include information which will help you easily locate books of interest to you. Prices listed are to give you an "idea" of the relative cost. Some are 1978 or earlier prices and may no longer be valid. Those books for which no prices are listed are not necessarily free, we simply have no price information for them.

Environmental Education and Interpretation

Interpreting the Environment," Grant W. Sharpe, $16.50, an overview of environmental interpretation. The book includes writings on five themes: interpretive process, techniques of interpretation, supporting activities, professional development, and interpretation around the world.

"Acclimatizing" and **"Acclimatization,"** Steve Van Matre, $3.75 and $3.25 respectively, an approach to teaching environmental education. The author calls it "a sensory and conceptual approach to ecological involvement." Through this approach, the student role plays a bull frog as he squats in a marsh with only the top half of his head out of the water—to discover what it's like. Blind-folded, he takes a hike to investigate the world with his other senses. He climbs to the top of a tall tree to pretend he is a bird of prey, and does many other things to experience his environment.

"Interpreting Our Heritage," Freeman Tilden, $2.95, a classic piece of literature in the field of interpretation. This book presents the guiding principles and philosophy of the art of environmental interpretation.

"What Makes Education Environmental?" edited by Noel McInnis and Don Albrecht and copublished by Environmental Educators, Inc., and Data Courier, Inc. Copyright 1975. Address inquiries to Data Courier, Inc., 620 South Fifth Street, Louisville, Kentucky 40202. It provides "guidelines for developing environmental education programs and gives an organized, coherent look at the concept of environmental education process—teacher education, program models, environmental perception—the gamut of factors comprising EE."—Cover abstract.

"A Selected and Annotated Environmental Education Bibliography for Elementary, Secondary, and Post-Secondary Schools," Morehead State University, Morehead, Kentucky, $2.95. It is an extensive book list categorized by topics.

"Guide to Forest Industries Educational Materials," American Forests Institute, 1619 Massachusetts Avenue, N.W., Washington, D.C. 20036,

free in reasonable quantities. It "focuses on educational materials available from the forest industries associations. Included in the listings are publications, vocational guides, filmstrips, posters, charts, and games. The guide also features a brief description of each item, including suggested audience and cost, along with how-to-order information." (From AFI "Communications Update")

Plants

"Alaska Trees and Shrubs," Leslie Viereck and Elbert Little, $3.25 from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, contains easy-to-read detailed descriptions, line drawings, and a key to the trees and shrubs of Alaska. Many local trees and shrubs can be identified with this book. It was produced by the Forest Service.

"The Common Plants of the Hemlock-Spruce Forests of Alaska," D. Wayne Robuck, $2.75 from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, identifies 41 of the more conspicuous plants of the hemlockspruce forests of Alaska. Line drawings, descriptions, and a key for identifying plants is included. The key is written for the amateur botanist, with few technical terms.

"The Alaska-Yukon Wild Flowers Guide," the editors of Alaska Magazine, $7.95, descriptions, line drawings, and easy-to-identify full-color photographs of over 160 Alaskan species.

"Wildfowers of Alaska," Christine Heller, $7.95, descriptions and color photographs of 307 Alaskan flower species. These are grouped by color for ease of identification.

"Wild Edible and Poisonous Plants of Alaska," USDA Cooperative Extension Service, Box 109, Juneau, Alaska 99802, $1, identifies over 200 wild edible and poisonous plants which grow in Alaska. Color photographs and ink drawings supplement the text. For the price, this is one of the most extensive books available on the subject.

"Flora of Alaska and Neighboring Territories," Eric Hulten, Stanford University Press, includes the most complete scientific listing available of plants in Alaska. The text is supplemented by illustrations and locational maps.

"Flora of Alaska and Adjacent Parts of Canada," by Welch, includes a scientific listing of Alaskan plants.

A series of **natural history handbooks,** Publications, British Columbia Provincial Museum, Victoria, B.C., Canada V8W1A1, $0.50 to $4 each, identify flora and fauna of the Province. The set of handbooks is applicable to most of southeast Alaska. Among the 33 books are these: "Guide to Trees and Shrubs of British Columbia," "Some Mosses of British Columbia," "The Grasses of British Columbia," "The Ferns and

Fern Allies of British Columbia," "The Orchids of British Columbia," "The Heather Family of British Columbia," "Guide to Common Edible Plants of British Columbia," "The Lily Family of British Columbia," "Guide to Common Edible Mushrooms of British Columbia," "The Rose Family of British Columbia," "The Lily Family of British Columbia," "The Pea Family of British Columbia," and "The Figwort Family of British Columbia." Prices are among the most reasonable for natural history publications. $0.50 to $1 for most of the books, which vary in length from 50 to 330 pages.

The Golden Nature Guide Series, Golden Press, $1.95 each, includes inexpensive pocket field guides. Descriptions and full color drawings are in each book. Among them are these guides: Cacti, exotic plants, flowers, hallucinogenic plants, herbs and spices, nonflowering plants, orchids, trees, and weeds.

Marine Studies

"Fishes of Pacfic Coast of Canada," J. L. Hart, $14.40. Fisheries Research Board of Canada, Ottawa 1973, describes 325 kinds of saltwater fish living off the Pacific Coast of Canada. Each description is accompanied by a pen and ink drawing. The book is fairly applicable to southeast Alaska.

"Seashore-Animals of the Pacific Coast," Myrtle Johnson, Harry Snook, $8.50, a layperson's guide to nearly every invertebrate seashore animal from Mexico to Alaska. Descriptions of over 500 species and subspecies of 11 phyla.

"Marine Mammals," Delphine Haley, Pacific Search Press, $26.50, descriptions of 26 marine mammals of the eastern north Pacific Ocean and the Arctic Ocean, along with a discussion of marine mammal origins and conservation issues. Color and black and white photographs, illustrations, distribution maps, and a further reading list supplement the text. This book was written by 21 marine mammal authorities.

"Between Pacific Tides," Edward F. Ricketts and Jack Calvin, $12.50, a detailed account of the habits and habitats of the animals that live in one of the most prolific life zones of the world—the rocky shores and tidepools of the Pacific Coast.

"The Sound and the Sea," by Flora and Fairbanks, published by Pioneer Printing Co., Bellingham, Washington, a phylum-by-phylum account of marine invertebrate species commonly found in the Washington State-Puget Sound area. Photographs of each species described are included.

"1001 Questions Answered about the Seashore," by Berrill and Berrill, published by Grosset and Dunlap, provides general information about marine plants and animals.

"Starfish," Marjorie Furlong and Virginia Pill, Ellison Industries, Edmonds, Washington 99701, $2.95,

contains descriptions, pictures, and range information for starfish.

"Alaska Whales and Whaling," Alaska Geographic, volume 5, number 4, 1978, a history of Alaskan whaling and a description of whales and their habitats. Drawings and photographs accompany the text.

"Whales: Friendly Dolphins and Mighty Giants of the Sea," Jane Werner Watson, Golden Press, introduces the reader to whales. Chapters describe whale characteristics, identify a few species, and discuss human relationships with the animals. This is a children's book.

"Questions About the Oceans," Duback and Taber, Superintendent of Documents, U.S. Government Printing Office, Washinton, D.C. 20402, $2, basic information valuable in any study of the ocean.

"Keys to the Marine Invertebrates of Puget Sound, the San Juan Archipelago, and Adjacent Regions," by Eugene Kozloff, published by University of Washington Press, the only technical key available for identifying marine invertebrate species of the Northwest. Most species in the key also occur in southeast Alaska.

"Pagoo," H. C. Holling, Houghton Mifflin Co., relates the story of "Pagoo," a hermit crab. A favorite with children ages 5 to 8, the book is beautifully illustrated.

"The Year of the Seal," by Victor B. Scheffer, relates the life story of a fur seal. This book is written by one of the world's leading authorities on seals.

"The Marine Mammals of the Northwest Coast of North America," by Charles M. Scammon, Dover edition, 1968, $8, a description of marine mammals. Scammon was a whaling and sealing captain who became interested in the biology and natural history of whales and other marine mammals.

"The Year of the Whale," by Victor B. Scheffer, published by Scribners, 1969, the life of a sperm whale. The book includes much valuable information of toothed whales. This book won the Burrough's Medal for the best book in the field of natural history in 1969.

"Sea Mammals and Reptiles of the Pacific Coast," by Winson Brown, $10.95, descriptions of life histories and habits of Pacific Ocean sea mammals and reptiles.

"The Whales, Dolphins, and Porpoises of the Eastern North Pacific," out of print for several years but should be available after February 1980 from the Superintendent of Documents, U.S. Goverment Printing Office, Washington, D.C. 20402. It was designed by the USDC National Marine Fisheries Service to help lay people identify whales, dolphins, and porpoises. A simple identification system is used, grouping animals according to similar appearances in the field. Photographs and drawings of live animals in their natural habitats accompany descriptions of each species.

A series of **natural history handbooks,** Publications, British Columbia Provincial Museum, Victoria, B.C., Canada V8W1A1, $0.50 to $4 each, identify flora and fauna of British Columbia. The set of handbooks is applicable to most of southeast Alaska. Among the 33 books are these: "The Barnacles of British Columbia," "Guide to Common Seaweeds of British Columbia," "The Birds of British Columbia: Gulls," "The Birds of British Columbia: Shorebirds," "The Intertidal Bivalves of British Columbia," "Guide to Marine Life of British Columbia," "Some Common Marine Fishes of British Columbia," and "The Intertidal Univalves of British Columbia." Prices are among the most reasonable for natural history publications: $0.50 to $1 for most of the books, which vary in length from 50 to 330 pages.

The **Golden Nature Guide Series,** Golden Press, $1.95 each, includes inexpensive pocket field guides. Descriptions and full-color drawings are in each book. Among them are these guides: Seashells of the World, Seashores, and Tropical Fish.

Animals

Terrestial Mammals

"Mammals," William H. Burt and Richard P. Grossenheider, $5.95, descriptions of 380 species with common and scientific names and concise, detailed information on size, weight, color, habitat, and similar species within the animal's range.

"Mammals of Canada," National Museum of Canada, Department of Northern Affairs and National Resources, Ottawa, a guide to the mammals of North America, illustrated with a good index and bibliography.

"Mammals of Mount McKinley," USDI National Park Service, 1974, third edition, accurate life histories and interesting observations of Alaska's major mammals.

"Mammals of the World," by Ernest P. Walker, published by Johns Hopkins Press, 1964, $37.50, describes all known mammalian genera.

"Sentinel of the Snow Peaks, A Story of the Alaska Wild," by Harold McCracken, published by Lippincott, 1945, stories about Dall sheep.

"The Bearded Ones of the Arctic," by Magaret Rau, published by Crowell, 1976, the physical characteristics and life history of the musk ox and the history of musk ox reintroduction to Alaska. Illustrations are artistically high in caliber.

"Hunters of the Northern Ice," by Richard Nelson, published by University of Chicago Press, 1969, $5.95, describes how polar bears hunt. One chapter explains how Eskimos hunt polar bears.

"Alaska Yukon Caribou," by Olaus J. Murie, published by USDA, 1935, $10, Murie's original work on Alaskan caribou. This is one of the early definitive works by one of America's great wildlife biologists.

"Wonders of Caribou," by Jim Reardon, published by Didd Mead, 1976, $4.95, describes the caribou's physical habits, and relation to man. It includes good photographs, a bibliography, and an index.

A series of **natural history handbooks,** publications, British Columbia Provincial Museum, Victoria, B.C., Canada V8W1A1, $0.50 to $4 each, identify flora and fauna of the Province. The set of handbooks is applicable to most of southeast Alaska. Among the 33 books are: "The Mammals of British Columbia," and "Alien Animals of British Columbia." Prices are among the most reasonable for natural history publications: $0.50 to $1 for most of the books, which vary in length from 50 to 330 pages.

The **Golden Nature Guide Series,** Golden Press, $1.95 each, includes inexpensive pocket field guides. Descriptions and full-color drawings are in each book. Among them are guides to mammals and zoo animals.

Birds

"A Guide to the Audubon Alaskan Birds Chart," Anchorage Audubon Society, $3.50, a general introduction to birds and birding. The guide also discusses the history of Alaskan birds, Alaskan habitats, endangered birds of Alaska, and migration. The chart pictures 28 birds of Alaska and 12 of their seasonal habitats with a map of their migratory routes. Available from Anchorage Audubon Society, P.O. Box 1161, Anchorage, Alaska 99510.

"Peterson Field Guide Series: Western Birds," Rodger Tory Peterson, $5.95, the field marks of over 700 species of birds of western North America (excluding Mexico). Full-color plates and line drawings illustrate the descriptions.

"Birds of Alaska," Wildlife Management Institute, Stakpole, detailed descriptions of Alaskan birds, habitats, nesting, and migration routes.

"Birds of the Pacific Northwest," Dover edition, 1970, information on the birds of Oregon, but is good for all species in the western regions of North America.

"Birds of Southeast Alaska: A Checklist," USDA Forest Service, Audubon Society, Alaska Department of Fish and Game, and others, available from USDA Forest Service, P.O. Box 1628, Juneau, Alaska 99802. This free checklist is designed for "advanced" birders and notes the distribution and abandance of birds, by habitats and seasons, seen in southeast Alaska's Tongass National Forest.

"Birds of the Chugach," USDA Forest Service and Audubon Society, available from USDA Forest Service, P.O. Box 1628, Juneau, Alaska 99802. This free checklist is designed for "advanced" birders and notes the distribution and abundance of birds by habitats and seasons, seen in

south-central Alaska's Chugach National Forest.

A series of **natural history handbooks,** Publications, British Columbia Provincial Museum, Victoria, B.C., Canada V8W1A1, $0.50 to $4 each, identify the flora and fauna of the Province. The set of handbooks is applicable to most of southeast Alaska. Among the 33 books are these: "The Birds of British Columbia: The Woodpeckers, Crows and Their Allies," "The Birds of British Columbia: Upland Game Birds," "The Birds of British Columbia: Shorebirds," "The Birds of British Columbia: Gulls, etc.," "The Birds of British Columbia: Waterfowl," "The Birds of British Columbia: Owls," "The Birds of British Columbia: Chickadees, Thrushes, Kinglets, Waxwings, Pipits and Shrikes," and "The Birds of British Columbia: Diving Birds and Tube-nosed Swimmers." Prices are among the most reasonable for natural history publications: $0.50 to $1 for most of the books, which vary in length from 50 to 330 pages.

The **Golden Nature Guide Series,** Golden Press, $1.95 each, includes inexpensive pocket field guides. Descriptions and full-color drawings are in each book. Among them is a bird guide.

"Birds of North America," by Robbins, Bruun, Bertel, and Zim, edited by Golden Press, easy-to-read and well-illustrated field guide for bird identification.

Fish

"Alaska's Fisheries Atlas," Alaska Department of Fish and Game, Special Projects, 920 West Diamond, Anchorage, Alaska 99501, $70 for a two-volume set, reference on major Alaska fish and shellfish species.

A series of **natural history handbooks,** Publications, British Columbia Provincial Museum, Victoria, B.C., Canada V8W1A1, $0.50 to $4 each, identify the flora and fauna of the Province. The set of handbooks is applicable to most of Southeast Alaska. Among the 33 books are: "The Freshwater Fishes of British Columbia" and "Some Common Marine Fishes of British Columbia." Prices are among the most reasonable for natural history publications: $0.50 to $1 for most of the books, which vary in length from 50 to 330 pages.

The **Golden Nature Guide Series,** Golden Press, $1.95 each, includes inexpensive pocket field guides. Descriptions and full-color drawings are in each book. Among them are these guides: Fishes, Pond Life, and Tropical Fish.

Insects

"Insects," Donald J. Borror and Richard E. White, $6.95, descriptions and illustrations of 579 families of insects of North America north of Mexico.

The **Golden Nature Guide Series,** Golden Press, $1.95 each, includes inexpensive pocket field guides.

Descriptions and full-color drawings are in each book. Among them are guides to insects and insect pests.

Amphibians and Reptiles

"Amphibians and Reptiles in Alaska, the Yukon and the Northwest Territories," Robert Parker Hodge, $3.95, an introduction to amphibians and reptiles; a discussion of amphibians and reptiles in the mythology, religion, and superstition of northern peoples; a description of northern habitats; and a key to common species.

A series of **natural history handbooks,** Publications, British Columbia Provincial Museum, Victoria, B.C., Canada V8W1A1, $0.50 to $4 each, identify the flora and fauna of the Province. The set of handbooks is applicable to most of southeast Alaska. Among the 33 books are "The Amphibians of British Columbia" and "The Reptiles of British Columbia." Prices are among the most reasonable for natural history publications: $0.50 to $1 for most of the books, which vary in length from 50 to 330 pages.

The **Golden Nature Guide Series,** Golden Press, $1.95 each, includes inexpensive pocket field guides. Descriptions and full-color drawings are in each book. Among them is a guide to reptiles and amphibians.

General Titles

"Arctic Life of Birds and Mammals, Including Man," Laurence Irving, $27.50, describes Arctic Alaska animals—their habits and their habitats. Special attention is given to human survival in cold climates.

"Field Guide to Animal Tracks," Olaus Murie, $4.95, a key to the tracks of all the mammals and many of the birds and insects of North America. The text also relates much about the habits and habitats of each animal.

"The Ways of Wildlife," The Wildlife Society, $2.95, written in lay terms, effectively explains wildlife concepts. At the end of each chapter are suggested activities for teachers to lead with their classes. This book may be ordered from The Wildlife Society, Suite 611, 7101 Wisconsin Avenue, N.W., Washington, D.C. 20014.

"Alaska's Wildlife and Habitat," volume I and II, Alaska Department of Fish and Game, Special Projects, 920 West Diamond, Anchorage, Alaska 99501, $35 a volume, complete species information and maps for all localities in Alaska.

"Animals and Fishes of Alaska," published by A.S. Barnes and Company, descriptions of all the major game animals and fish in Alaska and their habitats.

"Animals in Polar Regions," Lerner Publications, 1976, describes the habits of ten animals in polar regions.

"Wildlife Habitats in Managed Forests, the Blue Mountains of Oregon and Washington," Jack Ward Thomas, technical editor, available from the Superintendent of Docu-

ments, U.S. Government Printing Office, Washington, D.C. 20402, estimated cost $20, "the first comprehensive wildlife planning tool for forestry. With the information provided, forest managers, wildlife biologists, and other specialists can work together to assure the existence of most, if not all, important wildlife habitats in managed forests. Although prepared for the National Forests in the Blue Mountains of Oregon and Washington, the management system is applicable to all managed forests." (From the promotional brochure.)

Physical Environment

"Glaciers," Robert Sharp, $2, basic facts as background to an understanding of glaciers and glaciological research.

"Rocks and Minerals," Frederick H. Pough, $5.95, descriptions and illustrations of all rocks that can be identified in their rough state and all common minerals. Includes rocks and minerals found on every continent.

"Field Guide to Snow Crystals," Edward La Chapele, $4.95, clear descriptions of types of snow crystals, how they are formed, how they are classified. Over 50 black and white photographs of snow crystals illustrate the text.

Environmental Pollution

"Save the Earth! An Ecology Handbook for Kids," by Betty Miles. Alfred A. Knopf, copyright 1974. Distributed by Random House, New York. "Discusses the ecological problems of land, air, and water pollution in the world today. Includes projects that illustrate these problems and possible solutions to them." (From the book's summary.)

"TANSTAAFL—There Ain't No Such Thing as a Free Lunch," Edwin G. Dolan, 1971, by Holt, Rinehart and Winston, Inc., $3.50 in 1977, what ecological ecomonics is all about. Chapter headings include: Principles of economics in one easy lesson, pollution and the price system, the political economy of ecological action, coping with the population explosion, environmental problems and economic development, preserving the wilderness—public interest or special interest, toward an ecologically viable economy.

"Tuning the Green Machine," by the Institute for Environmental Education and the Association of New Jersey Environmental Commissions, copyright 1978, published by Oceana Publications, Dobbs Ferry, New York, a 313-page textbook probably best suited to high school use. It comprehensively covers air and water pollution, water use and treatment, coastal zones, the environment and human health, energy conservation, pollution abatement standards, and land-use planning.

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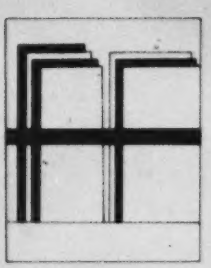
Miscellaneous

"First Scientist of Alaska," Messner, the life of William Healy Dal, and his biological explorations in Alaska.

"National Wildlife Federation's 1979 Conservation Directory," edited by Jeanette Bryant, 1979. Available from the National Wildlife Federation, 1412 Sixteenth Street, N.W., Washington, D.C. 20036 for $4, "a list of organizations, agencies, and officals concerned with natural resource use and management." (From the book's summary.)

"Alaskan Eskimos," by Wendell Oswalt, published by Harper and Row, $6.95, good information on ceremonial feasts and hunting relationships of Eskimos with their environment.



Agency and Organizational Publications

Several publications dealing with **natural resources, forestry, environmental education, national monuments, and national forest management** are available from the USDA Forest Service. To get copies, contact one of these USDA Forest Service offices in Alaska: P.O. Box 1628, Juneau 99802; Federal Building, Ketchikan 99901; P.O. Box 309, Petersburg 99800; P.O. Box 1980, Sitka 99835; or Pouch 6606, Anchorage 99502. A limited number of some publications are available from Pacific Northwest Forest and Range Experiment Station, 809 N.E. Sixth Avenue, Box 3141, Portland, Oregon 97208. Copies have also been sent to many libraries in Alaska. The publications include these titles:

- **"Conservation Tools for Educators."** This booklet provides some guidelines for anyone initiating a school environmental education program. Chapters include "Teacher Training," "Outdoor School Sites," and "Conservation and the School Curriculum" among others.
- **"Woodsy Owl Environmental Education Teachers Kit."** The kit contains materials to introduce children of elementary school ages to environmental education. It includes a poster, a coloring sheet, nine environmental activities, a "sing along" sheet, and more.
- **"Species List of Alaskan Birds, Mammals, Freshwater and Anadromous Fish, Amphibians, Reptiles, and Commercially Important Invertebrates,"** by Tamara Faris Taylor. It contains a listing of about 389 birds, 103 mammals, 58 fish, 6 amphibians, 2 reptiles, and 51 invertebrates by ecosystems in seven major regions of Alaska. These checklists indicate what species occur in the State, where they are, and how numerously they appear. The listings include most commercially important or potentially important species but not all species that occur in the State. (Available in spring 1980.)
- **"Sitka Black-Tailed Deer."** This publication is out of print, but copies should be available in most major libraries in the State. The book includes proceedings of a conference held in Juneau in 1978. It provides excellent background information of the life history, habitat, and environmental needs of deer in southeast Alaska. The report was produced by the USDA Forest Service and Alaska Department of Fish and Game.
- **"Bald Eagles in Alaska."** This publication describes the bald eagle and its Alaskan habitat, and it has a summary of eagle management programs in the State. It was produced by the USDA Forest Service and Alaska Department of Fish and Game.
- **"The Forest Ecosystem of Southeast Alaska."** This nine-volume set of booklets about the forest resources of southeast Alaska was produced

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by the USDA Forest Service. The set includes "The Setting," "Forest Insects," "Fish Habitats," "Wildlife Habitats," "Soil Mass Movement," "Forest Diseases," "Forest Ecology and Timber Management," "Water," and "Timber Inventory, Harvesting, Marketing, and Trends." Volumes vary in length from 22 to 107 pages. (Available in limited quantities from Pacific Northwest Forest and Range Experiment Station.)

Hundreds of publications, concerning **Alaskan living skills, gardening, canning, nutrition, construction, and clothing** are available from the USDA Cooperative Extension Service, for free or at cost. Among the titles available are "Reindeer and Caribou Recipes," "16 Easy Steps to Gardening in Alaska," "Tanning at Home," "Building A Log House in Alaska," "Proper Care of Seal Skins," and "Wild Edible and Poisonous Plants of Alaska." In our search for information for this directory, we have discovered that the USDA Cooperative Extension Service has one of the largest supplies of literature applicable to Alaskan environmental studies. Cooperative Extension Service offices are located in Anchorage, Bethel, Fairbanks, Homer, Juneau, Ketchikan, Nome, and Soldotna. They are listed in the telephone book under "U.S. Government, Agriculture Department. Publications and a publications list also may be ordered from USDA Cooperative Extension Service, P.O. Box 109, Juneau, Alaska 99802.

Publications about **fish, wildlife, and habitats** are available from the Alaska Department of Fish and Game. For further information, contact Alaska Department of Fish and Game, Subport Building, Juneau, Alaska 99801. The publications include these titles:

- **"Wildlife Notebook Series."** Individual leaflets describing habits, general appearances, and life histories of the various fish and wildlife of the State.
- **"Wildlife Notebook Series Teacher's Guide,"** a set of questions and answers, activities, and related information for each of the available W.N.S. leaflets.
- **"Where the Animals Live,"** a primary-grade coloring book with accompanying teacher's guide describing animal habitats and suggesting related activities.
- **"Planning and Using Environmental Education Study Areas,"** an outline for development of outdoor study areas with emphasis on fish and wildlife activities. (Available in spring 1980.)
- **"The Bears and You,"** a leaflet describing bear behavior and how to handle encounters with bears.
- **"Learn to Identify Salmon, Trout and Char,"** a guide to species identification.
- Wildlife informational leaflets on **caribou, deer and walrus.**

Several **environmental publications** are available from the Shell Oil Company. Among them are "Shell's

Policy on Environmental Conservation," "The Affects of Oil on Cold Water Organisms," and "The Tanner Bank." For further information, contact Shell Oil Company, Suite 810, 601 W. Fifth Street, Anchorage, Alaska 99501.

"Logger's Coloring Book," produced by Alaska Loggers Association is available in class-size quantities. The book includes suggested classroom activities. For further information, contact Information Officer, Alaska Loggers Association, Suite 200, 111 Stedman, Ketchikan, Alaska 99901.

Publications dealing with **solid waste, energy, and air, water, and noise pollution** are available free from the Alaska Department of Environmental Conservation. Among them are "Noise and You—The ABC's of Hearing Conservation," "Radioactive Wastes," "Health Effects of Air Pollutants," "Needed: Clean Water—Problems of Pollution," and "Tips for the Motorist—Don't be Fuelish." To obtain any of these publications or a complete list of available publications, contact Public Information Officer, Alaska Department of Environmental Conservation, Pouch O, Juneau, Alaska 99811.

Environmental publications of the Arctic Environmental Information and Data Center are available at cost. They include "Ancient and Current Methods of Taking the Bowhead Whale," "Chukchi Sea: Bering Strait—Icy Cape; Physical and Biological Character of Alaskan Coastal Zone Marine Environment," "Anadromous Fish Inventories," and "Winter Water Availability and Use Conflicts as Related to Fish and Wildlife in Arctic Alaska—A Synthesis of Information." For further information, contact Arctic Environmental Information and Data Center, University of Alaska, 707 A Street, Anchorage, Alaska 99501.

Three publications are available from the Fairbanks Environmental Center: "Institutional Barriers to Small-Scale Farming in Interior Alaska," by Helen Ross (free); "Symbolic Environmental Monitoring on the Trans-Alaska Oil Pipeline," by Gil Zemansky ($30); "Designs for Agriculture in the Tanana Loop: Appropriate Technology and Small-Scale Farming," by Sam Skaggs and Wendy Warnick (free). **"The Northern Line,"** a newsletter, is available for $15 a year. For further information, contact Fairbanks Environmental Center, 218 Driveway, Fairbanks, Alaska 99701.

The U.S. Fish and Wildlife Service has numerous publications dealing with units of the **National Wildlife Refuge System and wildlife-related abstracts.** For more information, contact the Public Affairs Office, U.S. Fish and Wildlife Service, USDI, 1011 East Tudor Road, Anchorage, Alaska 99503.

Soil Conservation Society of America Educational Booklets are

written in comic book form, at about 4th- and 5th-grade reading levels. The set of 11 conservation booklets includes "Plants, Animals and Man Sharing the Earth," "The Wonder of Water," "Making a Home for Wildlife on the Land," and "Plants: How They Improve our Environment." Booklets cost 35 cents a copy, with the price decreasing to as little as 9 cents each when large quantities are ordered. For further information, write to Soil Conservation Society of America, 7515 Northeast Ankeny Road, Ankeny, Iowa 50010.

"Helping Wildlife: Working with Nature," is published by the Wildlife Management Institute. This booklet introduces the concept of an ecological chain, elements which provide a foundation for life, and population dynamics. For further information contact Wildlife Management Institute, 709 Wire Building, 1000 Vermont Avenue, N.W. Washington, D.C. 20005. The price is $1 each.

"Center News," a newsletter of Alaska Center for the Environment, focuses on current environmental issues in Alaska. It is published twice a month. An annual subscription costs $15. For further information, contact Alaska Center for the Environment, 1069 West Sixth Avenue, Anchorage, Alaska 99501.

"Guidelines for the Provision of Outdoor Study Areas," by Nat Goodhue, is available from the Alaska Division of Parks. The booklet describes three kinds of outdoor study areas: **outdoor** classrooms, outdoor laboratories, and outdoor schools and the development standards for each. For further information, contact Statewide Recreation Services, Alaska Division of Parks, 619 Warehouse Avenue, Anchorage, Alaska 99501.

Energy-related brochures are available from Atlantic Richfield Company. Brochures and booklets include "About Offshore Energy," "Conservation: Bridging the Energy Gap," "Coal: Energy's Neglected Black Gold," and "Offshore Drilling: What's at Stake?" For further information, contact Atlantic Richfield Company, P.O. Box 360, Anchorage, Alaska 99501.

Pamphlets on **survival, conservation, plants, animals, and camping** are available from Boy Scout offices or through local Boy Scout distributors. Most publications are sold at a nominal price. Boy Scout offices may be contacted at P.O. Box 510, Juneau, Alaska 99802; 3117 Patterson, Anchorage, Alaska 99504; and 1400 Gillam Way, Fairbanks, Alaska 99701.

Technical reports and special studies relating to **environmental pollution** problems in Alaska are available on loan from the Department of Environmental Conservation. Among the titles available are these: "Unit Water Use in Alaska Municipal Water Supplies," "Water Pollution Control in Alaska," "Reference Book—Cold Regions Environmental

Health Seminar," "A Manual of Pesticide Safety for Alaskans," and "Sewerage and Sewage Disposal in Cold Regions." For a complete list of reports or further information, contact Library, Alaska Department of Environmental Conservation, Pouch O, Juneau, Alaska 99811.

Energy-related literature is available from Alaska Division of Energy and Power Development, Seventh Floor, MacKay Building, 338 Denali Street, Anchorage, Alaska 99501.

Coastal management and community plans, environmental impact statements and environmental data areavailable from the Kenai Peninsula Borough. For further information, contact Kenai Peninsula Borough, Planning Department, Box 850, Soldotna, Alaska 99669.

A **Misty Fiords brochure** is available from Tongass Conservation Society, Box 7282, Ketchikan, Alaska 99901.

Environmental impact statements and assessments concerning the Gulf of Alaska (northeastern, western, and off-Kodiak area) **Lower Cook Inlet,** and the Beaufort Sea are available from Alaska Outer Continental Shelf Office, USDI/BLM, P.O. Box 1159, Anchorage, Alaska 99510.

Free brochures on the **national parks, monuments, and historic sites** of Alaska are available from Area Director, USDI National Park Service, Room 202, 540 West Fifth Avenue, Anchorage, Alaska 99501.

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Curricula

"Enrichment Activities for Outdoor Education," edited by B. Heffner and K. Hinckley, out of print but available on loan from Belle Mickelson, School of Agriculture and Land Resources Management, 301 O'Neill Building, University of Alaska, Fairbanks, Alaska 99701. It was written by 30 members of the 1978 Alaskan Environmental Education class of the University of Alaska at Fairbanks. This book presents ideas for Alaskan environmental education programs. Topics include ecology, energy, wildlife, soils, water, solid waste, recreation, and others.

"Natural History of Alaska Investigations," by **Belle Mickelson** and Jill Thayer, out of print but available on loan from Belle Mickelson, School of Agriculture and Land Management, 301 O'Neill Building, University of Alaska, Fairbanks, Alaska 99701. This book was written for the University of Alaska X-CED (Cross-Cultural Education Development Program). It includes environmental activities especially suitable for use in the bush.

Curricula materials for Sea Week, a Juneau marine study program, available from the Southeast Regional Resource Center (SERRC). Worksheets for kindergarten through fourth grade studies may be purchased for 10 cents each. They are available to anyone in the State. Among the kindergarten worksheets are "Seaweeds," "Baid Eagle," and "Seal/Sea Lion." First grade worksheets include "Sponges," "Get Some Shrimp to Eat," and "Starfish." Second grade worksheets include "Mollusks," "Univalves," and "Bivalves." Third grade worksheets include "Zones on a Rocky Seashore," "How Starfish Can Eat a Mussel," and "Tide's In." Fourth grade worksheets include "Precocial Birds," "Bird Beaks or Bills," and "How Birds Get Food." Additional resources in the SERRC Instructional Materials Center are available on loan to schools in southeast Alaska. They include color illustrations of sea lions and sea otters, 20- by 30-inch color posters entitled "What are Marine Animals?" and "What are Marine Plants?" and slide-tape shows of "Marine Life of Alaska's Shores," "Mollusks of Alaska's Marine Waters," and "Birds of Southeast Alaska." For a complete list of worksheets and resource materials or for further information, contact Southeast Regional Resource Center, 538 Willoughby Avenue, Juneau, Alaska 99801.

"Let's Explore Energy," "Energy is Everywhere," and **Energy in Your World"** curricula guides available from Alaska Division of Energy and Power Development, Seventh Floor, MacKay Building, 338 Denali Street, Anchorage, Alaska 99501.

"A Curriculum Guide to Water Pollution and Environmental Studies: Activities," volume I, U.S. Environmental Protection Agency, for sale by the Superintendent of Docu-

ments, U.S. Goverment Printing Office, Washington, D.C. 20402. (The 1972 price was $2.25.) This curriculum guide has lesson plans for junior or especially senior high school classes. It includes scientific as well as social and political aspects of water pollution and many suggestions for class activities. Information on revisions and other volumes may be obtained from Training Grants Branch, Office of Water Programs, U.S. Enviromental Protection Agency, Washington, D.C. 20460.

The Northwest Arctic School District is developing **"Alaskanized instructional packets,"** which will include some environmental studies. For further information, contact Helen Roberts, Curriculum Coordinator, Northwest Arctic School District, Box 51, Kotzebue, Alaska 99752.

"Energy Conservation Activity Packet," Iowa Policy Council in cooperation with (and available from) the Iowa Department of Public Instruction, Grimes State Office Building, Des Moines, Iowa 50319. This packet costs $10 and presents a series of energy conservation activities for kindergarten to sixth grade students with a bibliography for each grade level. This packet has been popular with Fairbanks teachers who have used it.

"Safe Drinking Water in Alaska" and **"Air Quality in Anchorage and Fairbanks"** curricula units, Alaska Department of Environmental Conservation, Pouch O, Juneau, Alaska 99811. Curriculum units for kindergarten through twelfth grade levels deal with air and water quality. They are being developed by the Southeast Regional Resource Center, and should be available sometime during 1980. The Department of Environmental Conservation plans to conduct workshops and inservice sessions for teachers who want to learn more about using the curricula materials.

"Multi Disciplinary Wildlife Teaching Activities" by W.R. Hernbrode, available from ERIC Clearinghouse for Environmental Materials, Third Floor, 1200 Chambers Road, Columbus, Ohio 43212.

"Green Box," Humboldt County Schools, Office of Environmental Education, Court House, Eureka, California 95501 for $53 each. "Green Box" is a kindergarten through eighth grade curriculum for teaching a humanistic environmental education program at school, in the community, and at the outdoor school. The box contains over 350 cards, which direct students to consider their relationships with the world around them.

"Environmental Education Activities Manuals," by William B. Stapp and Dorothy Cox, 30808 LaMar, Farmington Hills, Michigan 48024 for $10 each set. The set includes six manuals. Volume I explains the "spaceship earth" concept. Volumes

II-VI include graded environmental activities for kindergarten through high school students.

"Nature Activities for Early Childhood," by Janet Nickelsburg, $7.50. This is a sourcebook of environmental projects for parents and teachers to complete with young children.

"OBIS (Outdoor Biology Instructional Strategies)," Discovery Corner, Lawrence Hall of Science, University of California, Berkeley, California 94720; set I-$8.50, set II-$9.50, set III-$10.50, set IV-$11.50, and Trail Module-$5. OBIS presents a series of outdoor activities that teach environmental concepts. Geared to ages 10-15, the activities emphasize interactions between organisms and between organisms and their environments. Activities are particularly suited for outdoor recreation and camping programs, but they may also be used in school settings.

"Ten Minute Field Trips: Using the School Grounds for Environmental Studies," by Helen Ross Russell, $6.95. Dr. Russell recorded in this book a series of short outdoor activities for elementary children. She designed it for use on the most urban of school grounds, because so often people think environmental education "can't take place there." Yet, the outdoor activities she presents can be conducted anywhere.

"The Hawaii Nature Study Program," Sister Edna L. Demanche, Ph.D., Building 3, Room 225, Curriculum Research and Development Group, University of Hawaii, 1776 University Avenue, Honolulu, Hawaii 96822. The Hawaii Nature Study Program for Elementary School Children includes four books: "Reef and Shore," "Parts of Plants," "Small Animals of the School Neighborhood," and "Insects." Although written for use in Hawaii, the books contain exellent basic information, projects, and activities for nature studies programs anywhere. The "Reef and Shore" program has been used as a model for several Alaskan marine education programs.

"Outdoor Study Units," Board of Education Services, Center for Education Services and Research, School Services Building, Yorktown Heights, New York 10598, $12 for the entire set but individual books may also be purchased. This set of nine booklets is designed for teachers of grades K-6. Each booklet includes classroom preparatory activities, outdoor activities, and follow-up lessons. Topics included are winter activities, wetlands ecology, the challenge course, reading the landscape, the cemetery, the pond, forest ecology, geology, and the stream. The books were designed for use at the Madden Outdoor Education Center. Two, "Reading the Landscape" and "The Cemetery," are very much geared toward the Madden Center. The others may be used or easily adapted for use elsewhere.

"Environmental Discovery Units," National Wildlife Federation, Educational Servicing, 1412 16th Street, N.W., Washington, D.C. 20036, $32 for the entire set or $1.50 for each booklet. A series of 24 lesson plan booklets of elementary environmental activities. Of particular interest to Alaskans is the "Snow and Ice" booklet. Among the other booklets are "Differences in Living Things," "Plant Puzzles," and "Fish and Water Temperatures."

"The Forest Book," by Helen Juliar, $7.95. This book was written by a woman who taught in a southeast Alaskan logging camp. It includes multilevel games, activities, and studies dealing with the forests of southeast Alaska.

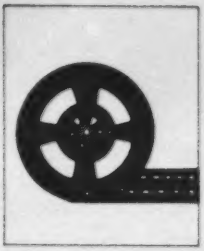
"We Can Help," Jenny Publishing Company, 57 Queen Avenue South, Minneapolis, Minnesota 55405, $20. This series of 24 outdoor classroom environmental guides deals mainly with wildlife and wildlife habitats. Activities are designed for grades 4-12.

"Teacher's Resource Guide for Environmental Education," edited by Kennedy and Hernbrode, Arizona Department of Education. A variety of environmental activities are presented on such topics as wildlife, air, water, soil, and so forth. Activities have been integrated into various school subject areas for kindergarten through twelfth grade levels.

"Energy, Food and You," Washington State Office of Public Instruction and the Office of Environmental Education. (To purchase, send a $5 check for one volume, or $10 for both volumes, payable to E.S.D. 121, to the Office of Environmental Education, Washington State, c/o Shoreline School District Administration Building, N.E. 158th and 20th Avenue, N.E., Seattle, Washington 98155, Attention: C. Peterson.) These books include lesson plans and learning activities concerning food consumption and energy. Volume 1 is for elementary school use; volume 2 is for secondary school use.

Representatives of Alaska Women in Timber are available to work with teachers to **develop curricula materials.** For further information, contact K.A. Gregg, Alaska Loggers Association, Suite 200, 111 Stedmen Street, Ketchikan, Alaska 99901.

In the Anchorage area, Audubon Society members are available to help teachers develop natural history units. For further information, contact Anchorage Audubon Society, Box 1161, Anchorage, Alaska 99501.



Audiovisual Materials

Films

Probably the largest supply of films (several hundred) concerning Alaskan natural history is available from the Alaska **State Film Library**. Many of the films were purchased by agencies or organizations and then placed in the library. The films are available on a free-loan basis. Among those of interest to environmental educators are "Brown Bears of Alaska," "Glaciation," "Admiralty, Fortress of the Bears," "Patterns of the Wild," and "Think Like a Mountain." For information, contact Alaska Department of Education, Film Library, Pouch G, Juneau, Alaska 99811, or Alaska State Library, Anchorage Center, 650 International Airport Road, Anchorage, Alaska 99502.

The **U.S. Fish and Wildlife Service** maintains a film library covering various wildlife-related subjects. For further information, contact Public Affairs Office, U.S. Fish and Wildlife Service, USDI, 1011 East Tudor Road, Anchorage, Alaska 99503.

Films are available on loan at no cost to the user from **Pictures, Inc.** A sponsoring agency or organization has paid for each film. Among the available films of interest to environmental educators are "The Grand Design: Glacier Bay," "The Arctic: The Wildlife: The Pipeline," "Forests are for People," and "The World Beneath the Sea." For further information, contact Pictures, Inc., 811 West 8th Avenue, Anchorage, Alaska 99501.

Modern Talking Pictures, Inc., provides films on a free-loan basis to the public. Among those which deal with the environment are "To Touch the Sky," "Wild Rivers," and "All the Difference." For further information, contact Modern Talking Pictures, Inc., 16 Spear Street, San Francisco, California 94105.

Shell Oil Company has a number of films on air, water, and land conservation, on the environmental aspects of oil exploration and production operations, and on refining and transporting petroleum. Titles include "Air is for Breathing," "Living Soil," "Undersea Oasis," "Steel Reefs," and "The River Must Live." For further information, write to Shell Oil Co., Suite 810, 601 W. 5th Street, Anchorage, Alaska 99501.

The **National Park Service** provides films on the national parks, conservation, and environmental education to the schools of the Anchorage area. For further information, contact USDI National Park Service, Alaska Area Office, Room 202, 540 W. Fifth Avenue, Anchorage, Alaska 99501.

The **Oregon State Film Library** loans films to people in several States, including Alaska. Among the films are "Winter: Story of Survival," "Tools in Land Use Planning," and "After the Glaciers." For further information, contact Continuing Edu-

cation Film Library, 1633 S.W. Park Avenue, P.O. Box 1491, Portland, Oregon 97207.

Alaska Loggers, Inc. has produced "The Story of Alaska's Sawmills," a 30-minute, 16-mm, color, sync-sound film documentary of Alaska native wood use. The film explores the history of logging in Alaska and ends with a detailed look at the operations of a modern cant sawmill. Free loan in Alaska is available from Pictures, Inc. (811 8th Avenue, Anchorage, Alaska 99501), the Alaska State Library (Pouch G, Juneau, Alaska 99811), and the Alaska Loggers Association (Suite 200, 111 Stedman Street, Ketchikan, Alaska 99901).

Slide Programs

Several slide programs are available in the Anchorage area from the USDI **Bureau of Land Management.** The programs vary in length from 6½ minutes to 30 minutes. They include these programs: "Alaska Outdoor Week," "BLM Fire Attack Policy," "Land Use Planning for Alaska," and "Inventory of Wilderness Character." Each program will be presented by a Bureau of Land Management representative who will be available to answer questions following the program. For further information and a complete listing of programs, contact Public Affairs Officer, USDI Bureau of Land Management, Anchorage District Office, 4700 E. 72nd Avenue, Anchorage, Alaska 99502.

Slide programs about the 9-million-acre **Arctic National Wildlife Range** are presented by the U.S. Fish and Wildlife Service to groups in the Fairbanks area. The Arctic National Wildlife Range in the northeastern corner of the State is the home (part of the year) of the Porcupine caribou herd, the largest in Alaska, numbering approximately 100,000 animals. For further information, contact Arctic National Wildlife Range, Box 20 Federal Building and Courthouse, 101 12th Avenue, Fairbanks, Alaska 99701.

Slide programs dealing with the national parks, endangered wildlife, history, and native cultures of Alaska are available in the Anchorage area on a free-loan basis from the USDI **National Park Service.** For further information, contact Area Director, USDI National Park Service, Room 202, 540 West 5th Avenue, Anchorage, Alaska 99501.

Outdoor recreation slide tape programs, including "Winter Recreation Opportunities," "Winter Camping and Survival," and "Avalanches," are available on loan to teachers in the Anchorage bowl. For further information, contact **Chugach State Park,** 2601 Commercial Drive, Anchorage, Alaska 99501.

Two slide programs are available on loan, at mailing cost, from the **Anchorage Audubon Society.** They are "Potters Marsh," which investigates the well-known site where thousands of waterfowl may be seen each year, and "Pribilof Islands,"

which examines the seals, birds, and flowers that attract thousands of tourists to the Pribilof Islands every summer. For further information, contact the Anchorage Audubon Society, P.O. Box 1161, Anchorage, Alaska 99510.

"Wild Edible and Poisonous Plants of Alaska" slide sets are available from the **USDA Cooperative Extension Service** for $25 each. The set of 103 slides and the script are from the booklet of the same name. For further information, contact Nutrition Program Coordinator, Cooperative Extension Service, University of Alaska, Fairbanks, Alaska 99701.

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Miscellaneous Tools

(Posters, records, animal skulls, and more)

Marine Posters, Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. This beautiful set of posters was developed by the USDC National Marine Fisheries Service. Each poster is printed in full color on sturdy, plastic-coated paper and is suitable for display purposes. Those which picture marine life common to Alaska are:

"Marine Fishes of the North Pacific," $2.30 each, 30 by 48 inches (stock no. 003-020-00051-7).

"Mollusks and Crustaceans of the Coastal U.S.," $3.20 each, 30 by 48 inches (stock no. 003-020-00087-8).

"Marine Mammals of the Western Hemisphere," $2.20 each, 36 by 24 inches (stock no. 003-020-00106-8).

Animal skulls, Carolina Biological Supply, Powell Laboratory Division, Gladstone, Oregon 97027; prices vary. Animal skulls, well-cleaned and bleached, include mink, raccoon, otter, rat, beaver, and others. They are valuable tools for wildlife studies.

National Audubon Society **Natural Science Study Aids,** Encyclopedia Britannica Educational Corporation, 425 North Michigan Ave., Chicago, Illinois 60611; prices vary. Study aids include nature charts, workbooks, nature bulletins, flashcards, slides, and five nature study programs on ecology, birds, trees, plants, and mammals. Many programs are general in scope and are applicable in Alaska, but a few are designed for use in the eastern United States. A price list and further descriptions are available from Encyclopedia Britannica.

Recordings of Natural Sounds, the Nature Company, P.O. Box 7137, 1999 Eldorado, Berkeley, California 94707; prices vary. Eight different long-playing records include three which are particularly well-suited for Alaska: "The Songs of the Humpback Whale," "Deep Voices: The Second Whale Record," and "The Language and Music of the Wolves."

Smokey Bear and Woodsy Owl handout materials, (often in class-size quantities), USDA Forest Service, P.O. Box 1628, Juneau, Alaska 99802; no cost. Handout materials include rulers, stickers, litterbags, comic books, posters, balloons, key chains, and more.

"Wildflowers of Alaska" and **"Berries of Alaska" posters** May-September: R.W. Tyler, Box 1281, Homer, Alaska 99603; October-April: R.W. Tyler, Box 581, Sutter Creek, California 95685; $7.50 each. Full-color posters illustrate wildflowers and wildberries native to Alaska.

Topographic maps of Alaska are produced by the USDI Geological Survey. According to "Index of Topographic Maps of Alaska," "The unit of survey is a quadrangle bounded by parallels of latitude and meridians of longitude. Quadrangles covering 7-1/2 minutes latitude and longitude are published at the scale of 1:24,000 (1 inch equals 2,000 feet). Quadrangles covering 15 minutes of

latitude and longitude are published at the scale of 1:62,500 (1 inch equals approximately 1 mile). A few special maps are published at other scales. Each quadrangle is designated by the name of a city, town, or prominent natural feature within it, and on the margins of the map are printed the names of adjoining published quadrangle maps."

An "Index to Topographic Maps of Alaska" includes a large map indicating the boundaries for each quadrangle in Alaska, a list of maps available, and a price list of the maps. The index is available from USDI Geological Survey offices. Also available is a brochure explaining how to read topographic maps.

All of the Alaskan topographic maps produced by the Geological Survey are sold over the counter or by mail order from Distribution Section, USDI Geological Survey, 310 First Avenue, Fairbanks, Alaska 99701. A limited stock of the standard topographic quadrangle maps is maintained for over-the-counter sales only at these Survey offices: 108 Skyline Building, 508 Second Avenue, Anchorage, Alaska 99501, and New Federal Building 709 W. 9th Street, Juneau, Alaska 99802.

Three posters are available free from the Alaska Department of Environmental **Conservation**: "The good things in life belong to all of us," "A river is more than an amenity, it is a treasure," and "Nature has made neither sun nor air nor waves, private property." The posters are produced by the Environmental Protection Agency. For further information, contact Public Information Officer, Alaska Department of Environmental Conservation, Pouch O, Juneau, Alaska 99811.

Maps of southeast Alaska, indicating the locations of logging operations and saw and pulp facilities with a statewide insert, are available from Alaska Loggers Association, Suite 200, 111 Stedman, Ketchikan, Alaska 99901.

"Green America" is a quarterly published 2- by 3-foot poster with text relating to a phase of forest management. It is produced by the American Forest Institute, 1619 Massachusetts Avenue N.W., Washington, D.C. 20036.

An **energy-environment computer game** is used by the Alaska Division of Energy and Power Development to illustrate the effects of energy consumption on the environment. For information about using the game, contact Alaska Division of Energy and Power Development, 7th Floor, MacKay Building, 338 Denali Street, Anchorage, Alaska 99501.

Posters depicting unique **landforms, glaciers, and wildlife** in their natural settings on the Chugach National Forest are available. The USDA Forest Service issued the series of four full-color posters. The 21- by 21-inch posters are free on a first-come-first-served basis. The posters will be made available to the public one at a time until supplies are exhausted. For further information, contact USDA Forest Service, PIO, Pouch 6606, Anchorage, Alaska 99504.

Sources of Supplies

Several companies supply equipment for naturalists and science educators. Most will send catalogs on request. Some are free; others are sold at a nominal price.

The Nature Company, P.O. Box 7137, Berkeley, California 94707.

Wards Natural Science Establishment, Inc., P.O. Box 1749, Monterey, California 93940. "Wards Biology, Earth Science, and Chemistry Catalog."

Van Waters and Rogers Co., P.O. Box 3551, Seattle, Washington 98134. "Van Waters and Rogers Scientific Apparatus Catalog."

Nature Center Associates/ Wholesale, 16 Holmes Street, Mystic, Connecticut 06355.

Environmental and Outdoor Education Materials Co., Rt. 1, Box 262A-2, Apex, North Carolina 27502.

Sites and Facilities

We have included a list of potential sites and facilities for group environmental experiences. Included are areas suitable for field trips and youth camps suitable for outdoor schools and environmental education workshops.

Statewide

Air quality monitoring sites in Anchorage, Juneau, and Fairbanks and a **pollution analysis laboratory** in Juneau are available for tours. For further information, contact the appropriate Alaska Department of Environmental Conservation Office: P.O. Box 1601, 675 Seventh Avenue, Fairbanks, Alaska 99701; MacKay Building—Room 1206, 338 Denali Street, Anchorage, Alaska 99501; or Pouch OS-MS1802, Juneau, Alaska 99811.

The various parks within the **Alaska State Park System** offer environmental interpretation and outdoor education opportunities. For further information, contact the district offices: Southeast District Superintendent, Alaska Division of Parks, Box 142, Sitka, Alaska 99835; Interior District Superintendent, Alaska Division of Parks, 4418 Airport Way, Fairbanks, Alaska 99701; Mat-Su and Copper Basin District Superintendent, Alaska Division of Parks, P.O. Box 182, Palmer, Alaska 99645; Chugach District Superintendent, Alaska Division of Parks, 2601 Commercial Drive, Anchorage, Alaska 99501; Kenai-Kodiak District Superintendent, Alaska Division of Parks, Box 1247, Soldotna, Alaska 99669; and Southwest District, Alaska Division of Parks, 619 Warehouse Avenue, Suite 210, Anchorage, Alaska 99501.

Southeast Alaska

John D. Argetsinger Methodist Camp is about 28 miles north from Juneau on the Glacier Highway. The camp can accommodate up to 75 people. Facilities include nine cabins with bunk beds and a large dining hall. For further information, contact Douglas United Methodist Church, P.O. Box 509, Douglas, Alaska 99804.

The Shrine of St. Therese is located at about Mile 22 on the Glacier Highway near Juneau. It includes a chapel and a conference facility, lodge with a kitchen, dining room and fireside lounge on the first floor, and rooms for up to 22 people on the second floor. Linen is provided. Meal service is optional. The shrine is located in a beautiful seaside forest setting appropriate for outdoor studies. For further information, contact Manager, Shrine of St. Therese, Box 153, Auke Bay, Alaska 99821.

George Parks Scout Reservation, Eagle River Camp, is located 30 miles north of Juneau at Eagle River. Operated by the Southeast Alaska Area Council of Boy Scouts, the camp can accommodate 85 people. Facilities include eight sleeping

cabins and a kitchen with dining area. The camp is not winterized. For further information, contact Council Executive, Southeast Alaska Council, Boy Scouts of America, Box 510, Juneau, Alaska 99802.

Camp Lorraine, operated by the Seventh-Day Adventist Church, is located on Vanks Island, near Wrangell. The camp can accommodate 90 people, with 10 people sleeping in each of the seven cabins and 20 people sleeping upstairs in the lodge. The lodge is a three-story A-frame building with a fireplace in the center and a kitchen at one end. All access to Camp Lorraine is by plane or boat, and transportation is the responsibility of the user group. For further information, contact Seventh-Day Adventist Church, 498 Douglas Highway, Juneau, Alaska 99801.

Hotel Halsingland in Haines has been used successfully as an environmental education workshop site. The hotel can accommodate over 120 people in rooms for two or three. The dining room can accommodate 60 people at a time. Family style meals are served. For further information, contact Hotel Halsingland, P.O. Box 158, Haines, Alaska 99827.

King Bird Farm is at Mile 7 on the Glacier Highway in Juneau. Located on the edge of the wetlands, the site includes two ponds, a barn, and the home of Jim and Mary Lou King. As a service to the U.S. Fish and Wildlife Service, the Kings care for injured birds. Wild geese, swans, and ducks native to Alaska live there. Guided tours are available on advance request. For further information, contact Mary Lou King, RR 6, Box 3491, Juneau, Alaska 99801.

South Central Alaska

Birchwood Camp, about 20 miles from Anchorage near Eagle River, is operated by the United Methodist Church. It has been used as the site for several environmental education workshops. With overnight and dining facilities for about 70 people, it is designed for both winter and summer use. For further information contact Manager, Birchwood Camp, P.O. Box 49, Chugiak, Alaska 99567.

Victory Bible Camp has been used by several school groups from the Anchorage area for environmental education programs. Three camps operate on the property. During warmer months, 30 people can be accommodated at Teepee Camp, 30 people at Ranch Camp, and 176 people at Alpine Camp. Alpine Camp's facilities include a kitchen and dining hall, a gymnasium, and nine winterized cabins which can accommodate 148 people in winter. Victory Bible Camp is 90 miles from Anchorage on the Glenn Highway. Meals are provided at the camp. For further information, contact Victory Bible Camp, Mile 95, Glenn Highway, Palmer, Alaska 99645.

Matanuska Guest Ranch and Riding Stables is a commercial resort with facilities which may be rented by groups from September to May. The ranch is about an hour's drive from Anchorage on Highway 1, bordered by Highways 1 and 3. The bunkhouse and ranchhouse are winterized and can accommodate 28 people. Meals are provided at the ranch. During warmer autumn and spring months groups may arrange to ride horses on weekends. For further information, contact Matanuska Industries, Inc., Star Route A, Box 70, Palmer, Alaska 99645.

Kenai Moose Range Environmental Education Camp, operated by the U.S. Fish and Wildlife Service, is located on the Swanson River Road about 20 miles from the Sterling Highway. The camp consists of two cabins with heat, each with four bunk platforms and room to set up cots. Other accommodations include tent platforms on which wall tents may be set up, a cookhouse with stove, refrigerator, tables, and storage area, pit toilets, and water supply. The facility is primitive and groups using the area must provide their own food, cooking, and sleeping gear. The cookhouse can be used as a classroom and dining hall. **There is no charge for use of the facility. For more information contact Linda Gintoli, Kenai National Moose Range, U.S. Fish and Wildlife Service, P.O. Box 2139, Soldotna, Alaska 99669.**

Camp Kushtaka is operated by the Chugach Council, Campfire. It is located on Kenai Lake near Cooper Landing. Six cabins provide bunkbed sleeping arrangements for 60 people in summer and 50 people in winter. A lodge with a kitchen and dining area can accommodate up to 75 people. During January-May 1980, the camp is available for use only on weekends. After August 1980, it is expected to be available on request, except during the summer. For further information, contact Campfire, Chugach Council, 326 "H" Street, Anchorage, Alaska 99501.

Solid Rock Bible Camp is located at Mile 90½ on the Sterling Highway near Soldotna. Camp facilities accommodate up to 135 people overnight in log cabins, a lodge, and a retreat center. The lodge also houses a dining room, kitchen, fireplace room, chapel, and snackshop. All facilities are winterized. Meals are provided as part of the camp fee. For further information, contact Solid Rock Ministries, Inc., Solid Rock Bible Camp, Box 489, Soldotna, Alaska 99669.

Kings Lake Camp is located near Wasilla. Accomodations include dining facilities for 150 people, sleeping facilities for 170 people, and two large buildings for meetings. The dining hall, two meeting buildings, and sleeping accommodations for 70 people are winterized. For further information, contact Kings Lake Camp, Box 1152, Anchorage, Alaska 99510.

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The Campbell Creek Tract is a small piece of land near Anchorage, managed by the USDI Bureau of Land Management. Each spring, it is the site of "Alaska Outdoor Week," an EE program for the Anchorage School District. The site is available for fieldtrips. For further information, contact the USDI Bureau of Land Management, 4700 E. 72nd Avenue, Anchorage, Alaska 99507.

Portage Flats Wildlife Management Area is a 9,000-acre tract located 50 miles southeast of Anchorage, which has been the site of habitat development programs for waterfowl. Every year, thousands of Canada geese and whistling swans and more than a dozen species of ducks pass through the area. For information, contact Public Information Officer, USDI Bureau of Land Management, 4700 East 72nd Avenue, Anchorage, Alaska 99507.

Tulik Trail (Mile 2.6 of Nancy Lake Parkway, off the Parks Highway near Willow) is a 1-mile-loop interpretive nature trail. The trail was constructed by Alaskan youths who were members of the Alaska Conservation Action Corps. A trail guide is available at the trailhead when the park is open. For further information, contact Alaska Division of Parks, P.O. Box 182, Palmer, Alaska 99645.

An **environmental study area** is being developed adjacent to the Ninilchik School. For further information, contact Dave Brann, Kenai Peninsula Borough Schools (Ninilchik School), Box 145, Ninilchik, Alaska 99639.

Visitors may tour the **Alaska State Forest Nursery and Alaska Plant Materials Center** in Palmer. At the Plant Materials Center, plant varieties are developed which are particularly well suited to Alaskan growing conditions. At the State Forest Nursery, seedlings are grown for reforestation. To make arrangements for a tour or further information, write Alaska State Forest Nursery, Division of Forest, Land and Water Management, Department of Natural Resources, 323 E. 4th Avenue, Anchorage, Alaska 99501, or Alaska Plant Materials Center, Division of Agriculture, Department of Natural Resources, Star Route B, Box 357, Palmer, Alaska 99645.

Northern Alaska

Camp Clegg, operated by the Girl Scouts, is located at Harding Lake, 40 miles south of Fairbanks on the Richardson Highway. Camp facilities include a lodge, a dining hall, six tent platforms, and three log cabins. Facilities will accommodate 60 people in summer or 20 people in winter. Use of Camp Clegg is restricted to those groups which are approved by the council camp committee. For further information, contact Farthest North Girl Scout Council, Camp Committee, 1030 21st Avenue, Fairbanks, Alaska 99701.

Camp Bingle, also located at Harding Lake, is operated by the Presby-

terian Church. Facilities at the camp will accommodate 80 people, and are availble only for summer use. They include a dining hall, seven cabins, and a chapel. For further information, contact Bingle Memorial Camp, Box E, College, Alaska 99708.

Lost Lake Camp is 59 miles south of Fairbanks on the Richardson Highway. Operated by the Boy Scouts, it is 406 acres in size with a 94-acre lake. Facilities include a kitchen, a lodge in which 60 people can be served meals, and some tent platforms. During summer, visitors sleep in tents, on tent platforms, or under the stars. During winter, 20 visitors may sleep in the lodge. Running water is available only during summer. For further information, contact Scout Executive, Midnight Sun Council, Boy Scouts of America, 1400 Gillam Way, Fairbanks, Alaska 99701.

Creamers Field, on College Road, is just 2 miles from downtown Fairbanks and 2 miles from the University of Alaska at College. Creamers is a 1700-acre wildlife refuge used by thousands of waterfowl and other birds as a stopover point in their northward migration. The best waterfowl viewing is in April and May. A 1-mile loop trail through varied habitat is excellent for nature walks. No other facilities are available. For further information, contact Alaska Department of Fish and Game, Game Division, 1300 College Road, Fairbanks, Alaska 99701.

The **University of Alaska, Fairbanks, Arboretum** is a 2-square-mile tract of land just north of the campus. The site features many native trees and smaller plants and an extensive hiking and cross-country skiing trail system. The site is available for field trip use. No advance permission for use is required.

Fairbanks Environmental Study Area is a 2,600-acre area the USDI Bureau of Land Management hopes to convey to the Fairbanks North Star Borough for environmental education use. Located east of Fort Wainwright, between Fairbanks and North Pole, the site has already been used for a number of EE programs. Features on the property include several bogs and ponds, the Chena River, the Alaska oil pipeline, and a variety of ecosystems. Vegetation of the site includes birch, spruce, willow, and alder. Among the wildlife in the area are bear, moose, and wolves. For further information, contact USDI Bureau of Land Management, P.O. Box 3505, Fort Wainwright, Alaska 99703.

Museums

More than 40 museums are located throughout Alaska. A few have extensive natural history exhibits. The museums on Elmendorf Air Force Base and Fort Richardson Army Base have outstanding Alaskan wildlife exhibits. The Fort Richardson Museum offers guided tours especially suitable for children. The Alaska State Museum in Juneau features dioramas of Sitka black-tailed deer, caribou, sea otters, Alaskan birds, and a polar bear. The eagle tree, featuring bald eagles and bears in a southeast Alaskan setting, is a favorite exhibit for many visitors.

Most museums in the State, however, are small and have limited natural history exhibits, or none at all. We have listed them, because any historical or cultural museum includes evidence of people's reliance on natural resources.

Adak Community Museum
Box 5244 NS Adak Alaska
FPO Seattle, Washington 98791

Alaska Historical Museum, Inc.
1675 E. 5th Avenue
Anchorage, Alaska 99501

Anchorage Historical and Fine Arts Museum
12 West 7th Avenue
Anchorage, Alaska 99501

Alaska State Museum
Pouch FM
Juneau, Alaska 99511

Alaskaland Museum
207 Minnie Street
Fairbanks, Alaska 99701

Baranof Museum and Kodiak Historical Society
P.O. Box 61
Kodiak, Alaska 99615

Bristol Bay Regional Museum
Box 152
Naknek, Alaska 99633

Carrie McLain Memorial Museum and Kogoaya Kozga Library
Box 53
Nome, Alaska 99762

Clausen Memorial Museum
Box 708
Petersburg, Alaska 99833

Cordova Historical Society and Museum
Box 391
Cordova, Alaska 99574

Damon Memorial Historical Museum
Box 66
Soldotna, Alaska 99669

Delta Historical Society and Museum
Box 255
Delta Junction, Alaska 99737

Dillingham Heritage Museum
Box 202
Dillingham, Alaska 99576

Dinjii Zhuu Enjit Museum
Box 371
Fort Yukon, Alaska 99740

Duncan Cottage Museum
Box 282
Metlakatla, Alaska 99926

Elmendorf Air Force Base Wildlife Museum
Alaskan Air Command
Elmendorf, Alaska 99506

Fort Richardson Army Base Wildlife Museum
172 Infantry Brigade (Alaska) Fort Richardson, Alaska 99506

Juneau Mining Museum
490 S. Franklin Street
Juneau, Alaska 99801

Kenai Historical Society and Museum
Box 1348
Kenai, Alaska 99611

Ketchikan Indian Museum
P.O. Box 5454
Ketchikan, Alaska 99901

Kotzebue Museum
Box 55
Kotzebue, Alaska 99752

Matanuska Valley Historical Society and Museum
Greater Palmer Chamber of Commerce
Palmer, Alaska 99645

Museum of the Arctic
NANA Regional Corporation
Kotzebue, Alaska 99752

Mt. McKinley Park Museum
Box 9
McKinley Park, Alaska 99755

NARL Museum
Naval Arctic Research Laboratory
Barrow, Alaska 99723

Pioneer Park Memorial Museum
1126 Sixth Avenue
Fairbanks, Alaska 99701

Sheldon Jackson Museum
Box 479
Sitka, Alaska 99835

Sheldon Museum and Cultural Center
Chilkat Historical Society
Box 236
Haines, Alaska 99827

Sitka Historical Society and Museum
Box 758
Sitka, Alaska 99835

Talkeetna Historical Society and Museum
Box 76
Talkeetna, Alaska 99676

Tok-Visitor Information Center
P.O. Box 232
Tok, Alaska 99780

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Tongass Historical Society and Museum
629 Dock Street
Ketchikan, Alaska 99901

Totem Heritage Center
c/o 629 Dock Street
Ketchikan, Alaska 99901

Trail of '98 Museum
Box 415
Skagway, Alaska 99840

Transportation Museum of Alaska, Inc.
Alaska State Fair Grounds
S.R. Box 7860
Palmer, Alaska 99645

University of Alaska Museum
Box 95351
College, Alaska 99701

Valdez Heritage Center
Box 307
Valdez, Alaska 99686

Whittier Historical Society and Fine Arts Museum
Box 738
Whittier, Alaska 99503

Wrangell Historical Society and Museum
Box 1050
Wrangell, Alaska 99929

Yugtarvik Regional Museum
Box 388
Bethel, Alaska 99599

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Funds

The number of people requesting environmental education grants is increasing and with it the number of people who are denied grants. What makes some grant proposals acceptable to the review boards and others unacceptable? How can you write a grant proposal that will be funded?

We can't give you a foolproof formula. But, here are a few guidelines (they were submitted by Jo Michalski who formerly held an environmental education specialist position with the Alaska Department of Education):

- First, **request a list of programs funded** in the past few years by the office offering the grant. This will give you an idea what has already been funded and what program ideas have not been funded (and perhaps have not been proposed). You can contact people who have had programs similar to yours funded, and ask them for ideas, assistance, or evaluation.
- Second, **be innovative.** Propose a program that is different than others. Don't duplicate EE programs being offered elsewhere (such as a schoolground environmental study area or sixth-grade outdoor school) and expect to get funds. If you must duplicate, find a new twist, something that will make your program unique. This is fairly easy to do in Alaska, since we have numerous unique aspects in our environment that could be tied into an environmental education program (arctic weather, oil pipeline, tundra, glaciers, fuel resources, and so forth). One program that capitalizes on a unique Alaskan situation is the recent EE grant project of the Anchorage School District that provides students a chance to be involved in the planning phase for the proposed new capital site.
- Third, **explain your budget in detail,** especially any salary and travel items. Many grants are nationally funded. Even though the review boards have dealt with Alaskan grant applications before, there may be new staff readers who aren't aware of the higher cost of living here and the necessity to fly rather than drive between many communities. If you are applying for funds to hire a consultant/coordinator for a school district EE program, it is useful to include a current teacher's salary schedule for comparison purposes.
- Fourth, **telephone the office that is awarding the grant** if you have any questions. It's a good idea to call at least once so they will find out who you are and know you're interested in having your grant funded.
- Fifth, **be brief and concise** in the main body of your grant. Give detailed statistics and explanations in the appendix, and provide enough direction to guide the reader through the appendix.

• Sixth, **stress adaptability** to other places of any resource materials you will develop. Review boards prefer projects that get a lot of "mileage" for the money.

• Seventh, remember, **you must sell your program.** Put some "pazazz" into your project and your explanation of it.

Probably the **largest source of grant monies** in environmental education is the U.S. Department of Education. For grant application procedures, write to Fund for the Improvement of Postsecondary Education, Office of the Assistant Secretary for Education, U.S. Department of Education, Room 3123, 400 Maryland Avenue, S.W., Washington, D.C. 20202.

The **Alaska Department of Education** can provide information on Federal grants and monies available to schools. For information, contact the Department of Education, State Office Building, Pouch F, Juneau, Alaska 99811.

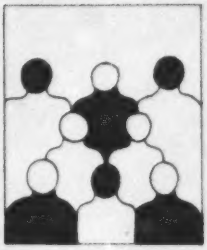
The **U.S. Environmental Protection Agency** provides two lists of grants available in environmental eduation. They are "Federal Education Programs with Potential for Providing Technical or Financial Assistance to Environmental Learning Activities" and "Federal Education Programs with Potential for Providing Technical or Financial Assistance to Students in Environmental Studies." For free copies, write to U.S. Environmental Protection Agency, Office of Federal Activities, 401 M. Street, S.W., Washington, D.C. 20460.

The Federal Register is the U.S. Government's daily publication which prints grant announcements, regulations, and other offical notices. The Federal Register is available in many local libraries. Subscriptions are currently available at $5 per month or $50 per year from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

The **Alaska Department of Environmental Conservation** occasionally has a few thousand dollars available for curriculum development. For further information, contact Public Information Officer, Alaska Department of Environmental Conservation, Pouch O, Juneau, Alaska 99801.

Alaska Loggers Association occasionally provides funds for small projects. For further information, contact Information Officer, Alaska Loggers, Suite 200, 111 Stedman, Ketchikan, Alaska 99901.

Investigate possible grant sources in your own community. Often organizations offer small grants for local projects. Other possible sources of grants are **large private endowments,** such as the Ford and Rockefeller Foundations.



Personnel

We have listed people who are currently involved in environmental education in Alaska. Because of Privacy Act regulations, we could only list business addresses or home addresses of individuals who gave us written permission to do so. If your name is not on the list and you would like to have it added (if we reprint the directory), please complete the response form at the end of this directory, and mail it to the address on the form. At the end of this personnel list, you may wish to add the names of other environmental educators.

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Response Form

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I would like my name and address listed in any future edition of an environmental education resources directory for Alaska published by the U.S. Department of Agriculture's Forest Service. I understand that such a directory will be distributed to people throughout Alaska and the Nation and that, as a result, my name and address would be released to the public through such a directory.

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Signature

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Name

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Address

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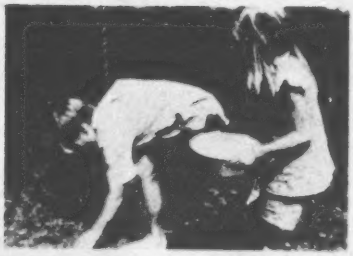
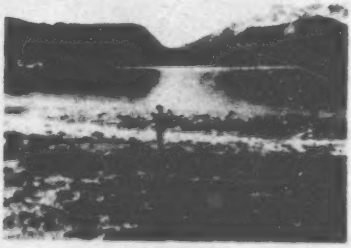
Send this information to **Environmental Education Specialists, USDA Forest Service (OI), P.O. Box 1628, Juneau, Alaska 99802.**





Environmental Education is the educational process dealing with human relationships with natural and humanmade surroundings, including the relation of population, pollution, resource allocation and depletion, conservation, transportation, technology, economic effect, and urban and rural planning to the total human environment. (Derived from the Environmental Education Act of 1970.)